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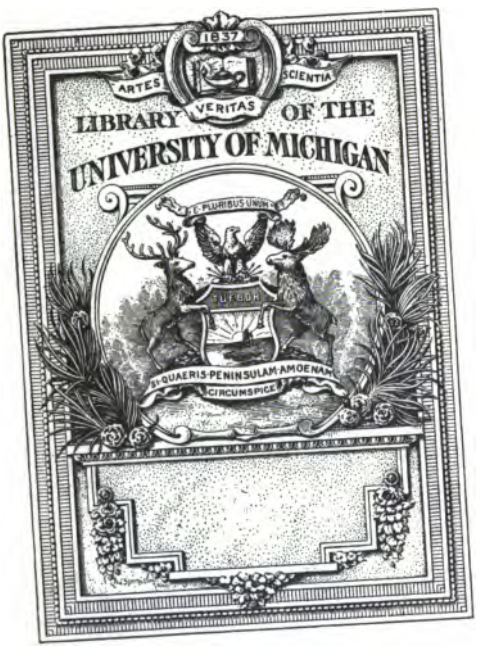
THE TECHNIQUE OF SPEECH

DORA DUTY JONES



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THE TECHNIQUE OF SPEECH

THE TECHNIQUE OF SPEECH

A GUIDE TO THE STUDY OF
DICTION
ACCORDING TO THE PRINCIPLES OF RESONANCE

BY

DORA DUTY JONES

HARPER & BROTHERS
NEW YORK AND LONDON
MCMIX

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Published October, 1909.

DEDICATION

The greatest Teacher the world has ever had once told His students that they could understand the principles He taught only by doing the work He enjoined upon them. His words (John vii., 16, 17) contain a universal truth, as applicable to the study of speech, of mathematics, or of any other science as to the study of religion. Those who do the work indicated in this book shall know if it be indeed *of the truth*.

TO SUCH STUDENTS
AMONG HER OWN PUPILS
THIS VOLUME IS DEDICATED BY
THE AUTHOR

BERLIN, *October, 1909*

244449

"*The same natural law which commands each of us to defend the place of his birth obliges us also to guard the dignity of our tongue.*"—DU BELLAY.

"*Whoever hesitates to utter that which he thinks the highest truth . . . may reassure himself by looking at his acts from an impersonal point of view. . . . He must remember that, while he is a descendant of the past, he is a parent of the future; and that his thoughts are as children born to him, which he may not carelessly let die.*"—HERBERT SPENCER.

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Painted by Otto Illies. Figs. I, II, III, IV from designs based on wood-cuts in Quain's Anatomy. By permission of Messrs. Longmanns, Green & Co., 39 Paternoster Road, London, E. C.

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FOREWORD

Of the degree in which a society is civilized the vocal form, the vocal tone, the personal, social accent and sound of its intercourse, have always been held to give a direct reflection. That sound, that vocal form, the touchstone of manners, is the note, the representative note—representative of its having (in our poor, imperfect, human degree) achieved civilization. Judged in this light, it must frankly be said, our civilization remains strikingly *un*achieved:

. . . no civilized body of men and women has ever left so vital an interest to run wild, to shift, as we say, all for itself, to stumble and flounder, through mere adventure and accident, in the common dust of life, to pick up a living, in fine, by the wayside and in the ditch.

—*The Question of Our Speech.* Henry James.

ALL fair-minded Americans, especially those whose national pride aspires to something more than mere recognition in the political arena and the commercial marts of the world, must recognize gratefully the true patriotism of the eminent "expatriate"

who, on revisiting America after an absence of twenty-five years, which enables him to see and hear us as other nations do, has had the courage thus to voice publicly, succinctly, and definitively the exact grounds of our disqualification for representation in the "international concert of culture."

The time was ripe for the utterance. The question of our speech has long been hovering in the atmosphere, has indeed distinctly hummed in our collective consciousness, even voicing itself at times, albeit in discreet and tentative whispers, in the more or less stable centres of our nascent social life.

More than one pedagogic free-lance has already attempted to scale the apparently impregnable barrier of common usage, behind which—to borrow the apt simile disclaimed by Mr. James—the Andromeda of our transplanted speech has been entrenched by "the American common school, the American newspaper, and the American Dutchman and Dago."

Even in the more sequestered educational centres of our provincial life, "solemn troops

and sweet societies" of women already *are* preoccupied with the rehabilitation of this "distracted and dishevelled" captive, in "beautiful and becoming draperies" which, if not patterned in all details after the fashions now in vogue in the mother-country, shall at least evince equal care and "due tenderness of interest" in her behalf.

The writer is but one of another considerable company, which, from the slight coign of vantage offered by the American mania to shine in the lyric and dramatic arts, has been patiently, if more or less timorously, prodding the "great, blatant, blowing dragon" of our national self-complacency in regard to the American vernacular.

That no one has been bold enough to sound a more general call to arms is because the boldest must hesitate to assume what might be considered an attitude of unwarranted authority on a subject concerning which the Anglo-Saxon race has no ultimate court of appeal, such as a national Academy or the traditions of a classic stage. In America especially, where even the shadowy

authority of a king's English is lacking, the question of speech has so long been loosely regarded as a mere matter of local habit and taste that any challenge of its fitness seems to impinge upon the sacredly guarded individual liberty of the People.

Happily for all concerned, the moment of need has produced the needed man. Now that the eminent American citizen of England, who combines in his own ideals the best traditions of both his native and his adopted country, has thrown himself into the breach, we are without excuse if we fail to follow his gallant lead, especially as the point of attack which he indicates bristles least with the sensitive pride of our youthful self-consciousness as an independent nation. In his trumpet-call for the elevation of a national *tone-standard* in speech, Mr. James has exhibited not merely a fine high courage and patriotism, but wisdom and tact as well, and, above all, a sound discrimination in regard to the essentials of cultured speech. The "free-born American citizen" will courteously strive to call Mr. St. John, Mr.

Sinjen; and Mr. Cholmondeley, Mr. *Chumley*, since those gentlemen so prefer, but you shall hardly convince him that he should pronounce *duty*, "juty"; *figure*, "figger"; *tune*, "chune"; *clerk*, "clark," etc., simply because Mr. Sinjen and Mr. Chumley do so.

The question of our speech is not, indeed, a mere question of pronunciation, in the general acceptation of that word—the fashions in which, having no established authority, are subject to constant change—but of the far more important and elementary processes of articulation and enunciation, the pose and modulation of the voice, etc. It matters little, for example, whether we pronounce *clerk* with an *e* or an *a*, the question is, do we give the vowel, whichever it may be, its full resonance and the consonants their true value *and no more*. What shall it profit us, indeed, in qualifying for the "international concert," to pronounce the word with the wrong vowel as the English do, if we say cla*rr*k with a (Middle West) "burr" of the *r*, which shivers the vowel into atoms and gives a positive physical shock to the

sensitive European tympanum, attuned to the most delicate and subtle articulations of that difficult and dominant consonant; or, if we permit it to elude us entirely, as it does on the more musical but too languid Southern tongue? On the other hand, even though England permit us to pass on the vowel with which the word is spelled, what shall it avail us in our international duet if we enunciate the same through the nose, after the (provincial) New England fashion; or add to it a superfluous secondary resonance, as in the two-syllabled "cle-*ik*" of the American metropolis?

In short, what our speech needs is not, alas! mere polish. It is chiefly a question of rudimentary defects. The most approved pronunciation, the most finished elocution, or the most artistic dramatic interpretation, combined with faulty diction, is like a high "shine" on a shabby boot; and, as regards our diction, we are in exactly the sad plight, so pertinently depicted by Mr. James, of having learned how to converse before we knew how to talk, and to talk before we knew

how to speak. Only by frankly facing this fact and patiently reconstructing our diction according to a definite tone-standard, can we hope to maintain our linguistic position among nations possessing more established traditions and a more mature culture. Nor is the undertaking so hopeless as it evidently appeared to our honored expatriate, who, after pointing out the dishevelled condition of our transplanted speech, disclaimed the rôle of Perseus, and retired under his insular ear-mufflers, with vague and dark forebodings of how English will be spoken in the United States a few years hence, after the millions of our foreign citizens, "wooed and weaned" from all the nations of the earth, have been allowed to work their will on the vernacular and "to dump their mountain of promiscuous material into the foundations of America."

Happily for our poor captive, that monstrous tidal wave of immigration is on the ebb, and her deliverer, though long delayed, and still moving discreetly, is at last at hand. Although provided neither with the

sword of Perseus, nor the winged sandals of Mercury, science is no less a messenger of the gods. Her message is ever the word of truth which alone sets free, and her mission, in the present instance, is to reveal the principles and laws that govern the formation and regulate the development of human speech. These put a solid working-basis under the dangling feet of the excellent precepts left hanging in mid-air by our retiring Mentor. Certainly we can hope to attain the *tone-standard*, which he admits to be "an art to be acquired and cultivated," only in the way that any other art is attained, by means of a perfected technique.

ERRATA AND ADDENDA

Add to FOREWORD, page xx.

Nota Bene.—As the second issue of this book goes to press the author is informed that, during her absence from America, an article has appeared in one of the American magazines, from the pen of Madame Melba, in which the great singer stated that during the years of her vocal training she took only three short singing lessons weekly, but worked several hours daily at *diction*, "spinning the tone out like a spider's web, while articulating the words." As this apt and beautiful simile describes more vividly and accurately the exact process of the author's work in resonance (see pages 269–279) than her own effort to put the same into words, she adds this quotation as repeated to her, hoping that the editor of the unnamed magazine may see it, and re-print, "by request," at least such a portion of the Diva's article as might again remind singers and vocal students of the importance of obtaining control, through the *speech processes*, of the beautifying and sustaining, but subtle and elusive, quality of resonance in which probably no human voice was ever more perfect than that of Madame Melba.

Page 3, line 11, omit "many"; add "Ellis and."
" 4, " 4, add after Scripture "and others."
" 4, " 5, omit "and photographing."
" 8, " 1, for "round" read "around."
" 10, " 11, for "or" read "etc."
" 30, " 17, for "suggest" read "suggests."
" 108, last line, for "breath" read "tone."
" 137, line 7, of foot-note, for "American Society of Music" read "Society of American Music," and

ERRATA AND ADDENDA

Page 137, line 8, of foot-note, "an officer" instead of "the President."

" 144, " 12, for "as the French say—" read "to reverse the French saying."

" 152, lines 2–3, omit "with each of these resonances."

" 152, line 4, after (III, Part II) add "but beginning always with the *High Front* vowel."

" 154, after line 3, insert "Vary the pitch of tone for each phrase through a scale of five notes in lower middle register (so-called), to avoid fatigue."

" 154, add as (*e*) "Public speakers, all, indeed, who wish to acquire well-modulated, musical speech-tones should practise the above exercises, omitting (*d*) and substituting for the text of songs the sentences, pages 279–291 (under the *resonant* consonants only, beginning with *m*)."

Vowel Table I, facing page 156, line 14, for "ä-Mädchen" read "ä-Träne."

Vowel Table II, facing page 156, line 14, for "ö-Götter" read "ö-öde."

Vowel Table III, facing page 156, add as foot-note:

Nota Bene.—All students of German diction should consult the latest edition (1910) of Professor Siebs' *Deutsche Bühnenaussprache* for the accepted stage pronunciation of the German vowels. Singers should note, however, that the variations of the "modified" vowels (*ä*, *ö*, *ü*) according to the open and closed syllable, are variations in *quantity* merely, the *tongue* position remaining the same, except where *ä* is given the resonance of the High Middle vowel as in *hält* (pronounced to rhyme with "welt").

Page 161, line 17, for "Götter" read "öde."

" 177, " 13, for "Mädchen" read "Träne."

" 200, omit lines 11, 12, 13, 14; add (after "consonants") "one of which is silent, or has a sibilant or nasal sound."

" 237, line 3, omit "g and k (or qu)."

ERRATA AND ADDENDA

Page 267, lines 19 and 20 should read after "(mentally)" "fold the tip backward, with help of the lower lip," until, etc.

" 271, line 6, after "deeply" omit ";" and add "but slowly;". (See paragraph V, below.)

" 272, " 2, of foot-note, after "alphabet" add "but to *spin* out the tone, so to speak, with the consonant alone."

" 273, " 15, after "arch" add "by a firm pressure of the tip at the *point of support.*"

" 280, " 15, for "human" read "humane."

" 297, " 5, after "15;" insert "in *have*, the Low Front Wide vowel, 14;".

" 301, lines 7, 8, 9, should read "In closed syllables ending with *ll*, *ld*, *lt*, and some with *st*," etc., and the word list beginning with "old" replaced by "*knoll*," "*roll*," "*scroll*," "*toll.*"

Add to NOTES AND REFERENCES, p. 319.

V

In *inhaling* for all the exercises given in this book great care should be exercised not to suck the air into the nostrils violently, nor to draw all the "intake" downward into the lungs, but to direct part of the stream upward so as to fill the resonators in the head as well. This is of vital importance to singers and public speakers especially, as the tones made by the vocal cords will have neither brilliancy nor carrying power unless the vibrations are communicated to the resonating chambers in the head. The vibrations can be *forced* by the pressure of the breath below the cords as high as the *nasal sinus*, on the natural outflow of the breath, but they will not reach the *frontal* and sphenoidal resonators unless there be air already in these chambers to vibrate!

PART I

THE TECHNIQUE OF SPEECH

I

INTRODUCTORY

IT has been well said that the only new thing left to be discovered at this advanced stage of scientific knowledge is a new point of view. Such, certainly, is the only originality claimed for this work.

The principle of resonance has been fully demonstrated by Helmholtz, Donders, Willis, Hermann, and other scientists, and the benefits to be derived from its application to the problems of language have been more or less clearly indicated by many later writers on the subject. The development and demonstration of these various theories is not the

least interesting of the modern fairy-tales of science, and seems to have reached its *dénouement*, at last, in the marvellous results obtained by Dr. E. W. Scripture in recording and photographing the vibrations of the speaking-voice, and reproducing these complete "speech curves" by means of the gramophone.

It must indeed give Americans pause to see with the naked eye these vacillating, slipshod curves of our national speech, and to pre-figure the moment when these erratic records shall be contrasted with the delicately firm and finished speech curves of our English cousins, in this unmistakable handwriting on the wall of science.

Unfortunately, the mission of this modern Daniel seems merely to emphasize by his cabalistic warning the judgment already voiced by our prophet in England—that our speech has been weighed in the balance and found wanting. For, alas! what can it avail us in our efforts to reform our curves, since we are not shown the *cause* of our drawling, diphthongal—or triphthongal—vowels, our

mumbled or grinding consonants, and our equal barbarities of intonation?

In this ultimate, visible analysis of the use and abuse of our noble mother-speech we have a startling object-lesson for the eye, more convincing, perhaps, than the less reliable testimony of the ear, which is so quickly dulled by its habitual *milieu;* but it can aid us as little in the actual work of perfecting our diction as the Caruso and Sembrich phonograph records can aid the singer in correcting a faulty tone-production or "placing" the voice. As the Caruso or Sembrich standard can be attained only to the degree that the student uses his vocal apparatus as Caruso and Sembrich use theirs, so our speech curves can be perfected only in proportion as the action of the organs of speech is controlled and perfected. At most, this triumph of modern science can merely provide us approximately perfect models of "speech curves." It still remains for us to find the cause of our lapses from the standard thus created, and the means of correcting the same. If the American of

the Middle West, for example, whose manner of articulating the consonant *r* Mr. James so felicitously, if inaccurately, describes as "a sort of morose grinding of the back teeth," will slowly and carefully enunciate the words *bar* and *barn* while holding the tip of his tongue firmly down behind the lower front teeth, instead of allowing that lively and strenuous member to trill (as it may with impunity *when followed by a vowel*, in such words as *barrel* and *brown*), he will find both the cause of his violation of one of the canons of English speech and its remedy where Shakespeare long ago told his players that all faults of speech are to be found and corrected—*on the tongue.* (See page 61.)

The present volume, issued at the urgent request and for the special use of the writer's pupils, offers to the public a definite, practical method of applying the theory of resonance to the study of diction and foreign languages, according to this principle, laid down for all time by Shakespeare; the discoveries and demonstrations of modern scientific research being found to illustrate or

illuminate the subject in proportion as they adhere to the dictum of the eternal poet. Since, as we shall see later, it can be demonstrated that the character of the vowel resonances depends entirely upon the shape of the vowel chamber, and that this resonator is regulated chiefly by the position of the tongue, it follows inevitably that perfect control of the tongue should give perfect control of these resonances.

"A ruly tongue makes a simple, natural pronunciation," says Mr. Ffrangcon Davies, in his eloquent and convincing contention for the importance of the word in *The Singing of the Future*. But when he adds that "an unrigid larynx makes a ruly tongue," he simply reverses the actual relation of the two organs. The motor power of the tongue, so to speak, is in no way derived from or dependent upon the action of the larynx; on the contrary, the larynx, being attached to the base of the tongue, is affected by every movement of the *extrinsic* muscles of the latter connecting these two organs; hence ***it is the unruly tongue that causes a rigid larynx.*** If it

were the other way round, all singers would acquire perfect diction as a natural result of correct tone-production, the very opposite of which is indeed Mr. Davies' own war-cry. "*The sheet-anchor of vocalists*," he says, "*ought to be a pure pronunciation.*" . . . "*Pure pronunciation* (*musical, sustained, fitting*), *once achieved, ensures right tone-production, and consequently right tone*"; and again, "*the quickest way to fine tone is via a fine pronunciation.*"

The writer is fully aware that Mr. Davies is only one of many vocal artists who are violently opposed to any conscious effort to control the action of the tongue while singing, and she wishes to emphasize the fact that she is in perfect accord with them on this point. The alpha and omega of her own contention is, indeed, that the tongue should be so trained in the study of diction, *as a separate and independent art*, that *subconscious* control of that organ, in singing and public speaking, shall be as natural and involuntary as that of the feet in walking or running. The professional singer is, indeed, in the same case with the professional run-

ner, and can no more enunciate acceptably, in singing, by means of the slight muscular strength and flexibility of the tongue sufficient for ordinary conversation, than he could win the Marathon race by the strength and agility demanded for ordinary walking.

To claim, as certain psychologists do, that no knowledge of the action of the tongue can be gained by paying attention to its positions and motions in speech, is about as logical as to claim that the *danseuse* can gain no knowledge of the art of dancing by paying attention to the position and movements of her feet; and to contend that diction and foreign languages must be learned "by ear" alone is about as reasonable as to demand that the pianist should acquire his technique by ear without any training of the muscles of his hands.

It would be interesting to know upon just what grounds those who advocate training of the ear alone, in the study of languages and singing, base their theory that knowledge gained through the sense of hearing is more "mental" or "artistic" than that acquired

through the other senses. Miss Helen Kellar's mental impressions have been gained almost exclusively through the sense of touch, and one would scarcely maintain, after reading her books, that her mental operations are less clear, profound, or "artistic," for that reason! The mind, not the ear, is the *hearer*, and the writer has often been amazed at the rapidity with which the critical faculty is developed in regard to questions of pronunciation, intonation or by proper training of the organs of speech. Students have frequently assured her that they could hear absolutely no difference in the resonances of certain similar but clearly distinguishable vowels, such as the Italian *e* in *bene* and the French *é* in *bébé*, until they learned to produce the two sounds themselves by correct positions of the tongue.

Until proper control of the tongue is attained, Mr. Davies' high, true, and beautiful ideal of singing, as given in the lines quoted at the head of the following chapter, must remain merely an ideal: a lovely but elusive *Fata Morgana* hovering ever just beyond

the singer's reach, over the mysterious gulf that separates speech and song. *This gulf is bridged only by the resonances created by the vibrations of the breath in the vowel chamber, or mouth,* and this chain of fairy-like resonances which are inaudible to the grosser outer ear, but may be heard distinctly by the inner ear in the *whispered* vowels (see page 29), is regulated, primarily, by the movements of the tongue.

In short, *resonance, being the only quality characteristic of the voice in both speaking and singing, is the only natural link between speech and song. It furnishes a continuous line of vibrations running alike through the speech tone and the vocal note, by means of which alone the singer may pass easily and artistically from the "concrete" pitch of the former to the "discrete" pitch of the latter; and only by gaining complete mastery of this sustaining line* THROUGH THE PROCESSES OF SPEECH *can the full value of the spoken word be given to the word in singing.*[1]

[1] As this book goes to press, a discovery in regard to wireless telegraphy is announced which proves, by de-

By the same token, the control of resonance so improves the quality and character of the speaking-voice as to render the work indicated in this book quite worth the while of any one whose speech fails to please the ear of cultured and critical acquaintances. The most beautiful speaking-voice the writer has ever had the pleasure of hearing is that of an English lady of Italian parentage, the daughter of the two great singers, Mario and Grisi. The fact of this high heritage was not known, however, when the lady

monstration in a different field, the scientific principle upon which the writer bases her theory of the line of resonance uniting the two processes of word-production and tone-production. An instrument has been invented in Berlin that produces electrical vibrations in the form of sustained musical tones, by means of which wireless messages can be transmitted many times as far as by the Morse code of long and short waves, and the softest tones distinctly heard even during the most unfavorable atmospheric conditions. As these continuous electrical sound-waves correspond exactly to the continuous vibrations created by the human voice in "intoning" correctly (see page 154), the reader will at once recognize the corresponding advantage to be gained from the use of this sustaining line of resonance in the study of diction for singing, public speaking, or even reading aloud.

was first heard in Florence, speaking informally to a small company of English and American people, in English of the most exquisite purity. The chief charm of the voice was in its resonance; so perfect indeed, and so perfectly sustained was this line, that it suggested the tones made by the muted strings of a violin, or by a 'cello, and one felt that at any moment by a slight increase of breath pressure the speech tone might become a perfect vocal note. Such mastery of the line of resonance demands not only perfect control of the two streams of the breath, but proper adjustment of all the resonators above the larynx, which in turn depends to no small degree, as will be shown later, upon the positions and movements of the tongue.

The writer's work along this line follows as closely as possible the general principles of vowel production formulated by Dr. A. M. Bell in *Visible Speech*, but by a different method, based upon the discovery, in her experiments with public speakers and singers, of a definite *point of control* in the mus-

cular action of the tongue (see page 72), from which the movements of that organ may be directed easily and naturally, *through the sense of touch*, and the processes of speech thus carried on without interfering with the poise or action of the larynx. If, in case of singer and public speaker, the *intrinsic* muscles—those composing the body of the tongue—be strengthened by proper exercise, thus preventing any strain upon the vocal cords through the *extrinsic* muscles connecting the tongue with the larynx, perfect adjustment of the vowel resonances to the speech tone or vocal note may be secured *without the sacrifice of either word or tone.*

By means of the increased strength and flexibility thus gained, the student may also acquire foreign resonances with accuracy and facility, and eliminate from his speech all so-called *accent*, whether foreign, provincial, or local; all such accent being chiefly the result of *wrong positions and motions of the tongue or other organs of speech*,[1] as the

[1] "The utter inability of the ear to distinguish the loudness, pitch, and duration factors in accent has

writer has demonstrated in scores of cases. She will cite but two, both of which can be verified if the reader desires. One, a gifted public reader and otherwise well-trained elocutionist, in ten weeks' study of the principles given in this book, corrected a marked "Western" (American) accent, to the wonder and mystification of her English and European friends. The other, a singer, also an American, after two months' training according to the same principles, in the French and German vowel resonances, learned, *without any previous knowledge whatever of those languages*, a *répertoire* of French and German songs, which she sang in various cities of Europe, with a purity of diction especially remarked by numerous linguists and vocal artists. Nor were these songs less intelligently or artistically rendered than those sung in her na-

been strikingly illustrated in discussion of the Lithuanian accent," says Dr. E. W. Scripture (*Experimental Phonetics*, page 513). If not to be relied upon in regard to the qualities of *tone*, which *is* governed by the sense of hearing, how much less can the ear be trusted to guide the motions and regulate the positions of the tongue and other organs of speech, which are, primarily, under the control of the sense of touch?—D.D.J.

tive language, or in Italian, already acquired "by ear" and corrected by training of the tongue; as the text was translated for her as comprehensively and vividly as possible, so that, while singing, she carried a perfect concept of the *content* of the words —emotional, intellectual, pictorial, or what not—in her own mind, whence the singer's words are transferred to the hearer, informed, "colored" if you will, but made alive, eloquent and convincing only by the intelligent conception and individual interpretation of the singer (see pages 124–126). This case is cited here as the only possible way in which to indicate clearly the general principles and lines followed out in this work, which may be summed up briefly as follows:

Language, whether spoken or sung, consists of *two separate and distinct processes, carried on simultaneously:* word-production and tone-production. While the vocal organs (controlled by the ear) are producing tone, the organs of speech (controlled, subconsciously, by the sense of touch) are producing vowels and consonants; these two processes

are unified into syllables by the voice impulse (produced by involuntary contraction of the glottis), the syllables being combined into phrases by the action of the breath, and each phrase emitted *on a sustained line of resonance*, by means of which, in case of the singer, the rhythmic measure of the poet's verse is adapted to the melodic form chosen by the composer.

The singer may also set it down as an axiom that "voice placing" depends, in no small measure, on correct *vowel placing;* and a careful study of the technique of speech according to the principle of vowel resonance will prove to any unprejudiced vocal instructor that the greatest obstacles against which he has to contend in the delicate, intangible, psychological art of tone production are due to *habitual improper adjustment of the resonators for the processes of speech.*

In short, as the breathing of the singer, actor or public speaker, while apparently natural and effortless, is an acquired habit of breathing, so their diction, while it must appear equally natural and effortless, is an acquired diction; and the transition from the

speech of ordinary conversation to this lyric diction (if one may be allowed so to designate the *sung word*), or even to the sustained diction of the public speaker or reader, is made most easily, naturally, and artistically by the study and practice of *vowel resonance*.

The fact that no definite practical application of this principle to the study of diction has been made by teachers of phonetics has created a wide-spread and stubborn prejudice, among singers especially, against the study of that science, which is, as Doctor Sweet of Oxford puts it none too strongly, "the indispensable foundation of all study of language"; and again, "if our present wretched systems of studying modern languages are ever to be reformed, it must be on the basis of a preliminary training in phonetics, which would at the same time lay the best foundation for the pronunciation and elocution of our own language."

This blind and unreasoning prejudice on the part of singers has been further aggravated by the exploitation of various methods which sacrifice the *organic* to the *acoustic*

work, or neglect the training of the tongue for exaggerated *lip-shaping* and "mouthing" of the vowels, to the detriment of the resonant tone. When, upon the overworked vocal student, floundering amid the confused alphabets of several modern languages, is imposed the added labor and confusion of acquiring a separate phonetic alphabet (consisting of the same letters gone mad and presenting themselves upside down and wrong side out), it is small wonder that he should develop a sort of *phono-phobia* which puts him beyond the aid of even the otherwise rational method of the International Phonetic Association. If these hard-working students and brave young artists alone are spared useless toil and waste of valuable time by the line thrown out to them in the second part of this book, the writer will find therein her best reward for the years of research and experiment devoted to the work.

Diction, like tone-production, is of course a subject that cannot be taught "by the book" alone. Hence, while the writer holds back nothing of her method that may be of

service to the student, giving even her system of exercises for increasing the flexibility of the organs of speech and the control of the resonators, she does not guarantee results, except under her own instruction or that of her authorized pupils. The exercises are based on a definite principle of tension and relaxation, and must be varied to suit the needs of each individual, according to the muscular development of the organs of speech and the habits of articulation, enunciation, breathing, etc., already established. In no case where this has been done, however (the *principle* being faithfully adhered to and patiently applied), has she known the exercises to fail in securing the conditions and results they are intended to accomplish—relaxation of the muscles of the jaw and throat, strength and flexibility of the organs of speech, especially of the tongue, and the development of *tactile sensibility* in the latter, for control of the processes of articulation *through the sense of touch*, while the ear directs the processes of tone-production and emission, phrasing, expression, etc.

INTRODUCTORY

For a number of years past the writer has given out freely to her classes in New York, London, Paris, Florence, and Berlin, the principles and method of her work; but she holds neither herself nor the method responsible for any failures made by singers and teachers among her pupils who have attempted to modify these principles or "adapt" them to other methods of work.

A classification of the English vowels alone has been attempted; but for the benefit of the many singers and students of foreign languages among her pupils, the writer has included in the Vowel Tables the Italian, French, and German vowel resonances, in the arrangement of which, according to their *rapprochement* to the English sounds in the gamut of resonances, she has had the benefit of the criticism and approval of eminent linguists and vocal instructors of each of these nationalities. So numerous are the scientific authorities consulted that it would be impossible to mention even the names of those to whose work she feels herself most deeply indebted.

II

VOWEL RESONANCE IN SPEECH AND SONG

The voice of the future must prove that it grows out of language, and singers must begin their studentship with the singing of thoughts; for thought is the fount of language and language the fount of tone.—FFRANGCON DAVIES.

DURING the half-century or more that has elapsed since the discovery and demonstration of the principles of resonance, our knowledge of the art of speech has been entirely revolutionized.

The study of diction is no longer limited to parrot-like imitations of teachers, orators, and actors. Correct and even cultured pronunciation is no longer the exclusive prerogative of those to the manor—or the manner—born; nor can it now be considered, as certain writers on the subject once maintained, a mere "trick" of polite education.

VOWEL RESONANCE

While finished and beautiful speech must ever be regarded as an art rather than an exact science, it is now known to be based upon principles so scientific that no one need despair of speaking his own and other languages correctly, even with distinction, provided he has the patience to apply to his speech the laws deduced from the principle of vowel resonance.

In this universal principle of language formation we have not only the simplest and most effectual means of perfecting articulation and enunciation, but an infallible guide in ascertaining the proper pose of the speaking-voice and in cultivating refined and musical speech tones and inflections. Above all, now that the functions of the resonators are fully understood and can be readily controlled by the application of these laws, it is no longer necessary for the singer to sacrifice to the exigencies of tone-production the poetic thought embodied in the words of his song, by which it is distinguished from all other forms of music, and which makes of the singer something nobler than a reed or

string instrument. Mere vocalization is not song. Tones however pure in quality, however perfect in emission, can only express, and but vaguely at best, the elementary emotions of the human heart; *thought* demands for its expression

"The spirit's shaping light, mysterious speech,"

that clearly "sculptured sound" which George Eliot so happily characterizes, in the poem from which we quote, as "the thought-begotten daughter of the voice."

In certain Italian operas, where the music is merely "emotional speech" supplemented by dramatic action, imperfect diction may still pass muster; but no singer who mumbles or garbles his words in real music drama, such as Wagner's operas, or in oratorio, church music, or concert singing, can be ranked as an artist, however faultless his tone or finished his vocal technique.

Since the time of Schubert and Schumann the poetic thought has become more and more dominant in the art of the song composer. In the modern lyric "art song," the

word, if not indeed paramount, is of equal importance with the music. This demands a perfection of diction at least equal to that of the tone-production. The most artistic vocalization is inadequate to interpret such a song as *Mandoline*, for example, in which the delicate, elusive cadences of Verlaine's verse are intertwined and interpenetrated with the refined and exquisite harmonies of Debussy, unless the singer has also perfect mastery of those subtleties of vowel resonance which the French have evolved from the musical but monotonous Latin gamut of open and closed vowels—the delicate sonority of the (so-called) nasal resonances; the veiled brilliancy of the covered vowels; the spirit-like vanish of the elusive final *e*—together with the fairy-like precision and purity of consonant, by means of which the whole should be woven into one unbroken, flowing arabesque of iridescent tone and vowel color.

Fortunately for the singer who has to meet the demands of the modern song-writers, the discovery of the principle of vowel resonance has furnished a key to the

ever-increasing difficulties of speech in singing. This scientific principle may be briefly outlined as follows:

In the production of the human voice, when the vibrations or sounds created by the passage of the breath between the vocal cords are directed into the hollow cavities of the head and face, the character of the vibrations is altered by the shape of these "re-sounding" cavities or *resonators*, adding to the tones of the voice the quality known as *resonance*. Those vibrations which pass through the resonating cavity, called in common parlance the *mouth*, are there segregated into groups varying in number and length with every change made in the shape of this resonator or vowel chamber, each group producing a different and distinct resonance called a vowel. (See "Notes and References," page 315, I.) Thus we see that a vowel is not merely a sound, but a *harmony* composed of all the sounds made by the breath in the larynx and the resonators above it. The scientific experiments made by Monsieur Rousselot, Doctor Scripture, and others, in

recording the complete vibrations of the speaking-voice, have revealed the exact relation of these vowel resonances, or "cavity tones," to the fundamental tone made by the vocal cords in the marvellous *duo* performed by the organs of speech and the vocal organs in the production of the human voice.

Unfortunately for the student of English diction, however, Doctor Scripture practically ignores the important part played by the tongue in the processes of speech, the theory of word production deduced from his experiments being based upon the untenable and (for singers and public speakers) *dangerous* hypothesis that vowels originate in the larynx. (See "Notes and References," page 316, II.) That it is a physical impossibility to produce any distinguishable vowel in the larynx will be fully demonstrated in the following chapter. Suffice it to say here that Doctor Scripture has stated the ultimate proof of this fact himself in admitting that the removal of that organ does not destroy the ability to speak clearly and distinctly. Certainly we are not informed that the silver larynx supplied

by science, in such cases, is so marvellously constructed as to "contract in a different manner" for, let us say, each of the forty different vowel sounds included in the four languages considered in this work!

In her experiments with singers, the writer has found that the real *vowel impulse*—the segregation of the vibrations of the voice into groups varying in number, each producing a different vowel sound or resonance—*is given by the tongue* at the point at which the *intrinsic* muscles are slightly tensed to maintain the shape of the vowel chamber against the impact of the fundamental tone waves. (See page 74.) This fact may be readily demonstrated by the reader for himself in the following manner:

While holding the mouth well open, with the lower jaw relaxed and a distance of about one inch between the upper and lower teeth, let him *whisper* distinctly the five cardinal vowels *a*, *e*, *i*, *o*, *u* (see Vowel Tables Nos. 25, 15, 1, 33, 30), and he will note: first, that *the position of the tongue changes with every vowel sound;*

second, that while any number of vowels may be whispered (or spoken and sung) on a single voice impulse, *no two of these resonances can be produced with the tongue in the same position.* Again, if, while whispering the cardinal vowels on a single sustained breath, the ears be stopped with the fingers, so that the vibrations made in the mouth or vowel chamber may be conveyed directly to the auditory nerve without mingling with the sounds outside the body, he will find that not only has each vowel a resonance peculiar to itself, but that each of these resonances has a distinctive *pitch*, independent of the pitch of the tone with which it may be spoken or sung; the pitch of the resonances rising as the tongue moves forward and falling as the tongue moves backward.[1]

[1] See *The Voice*, by Dr. W. A. Aiken (Macmillan & Co., London and New York), for an interesting study of the whispered vowels. The writer does not, however, commend regular practice of these whispered resonances, except under the personal supervision of a competent and careful teacher; and even thus they may easily be overdone by the pupil out of class. A *pure* whisper is difficult to produce, extremely difficult

The fact that the pitch of a vowel (as of any sound made in the vowel chamber) varies with the *size*, as its character varies with the *shape*, of that resonator, and the importance of the office of the tongue in regulating the same, is also demonstrated in whistling. Every whistler knows that his tongue moves forward, thus decreasing the size of the vowel chamber for high notes; and *backward*, thus increasing the size for low notes. Furthermore, if he will whistle slowly and softly the highest note in his "gamut" and then the lowest, he will find that the former has something even of the *character* of the High Front vowel—that is, the sound of *e* as in *we;* while the latter equally suggest the resonance of the High Back vowel,

to sustain, and if used to excess the result is apt to affect the action of the vocal cords. A few experiments in class should be sufficient to test and regulate the position of the tongue and the adjustment of the other organs of speech so as to secure the clearest and fullest vowel resonances. *Indeed, since both the character and pitch of the resonances depend upon the shape and size of the vowel chamber, which is chiefly regulated by the position of the tongue, it follows that if the tongue be properly controlled, both the character and pitch of the resonances will take care of themselves.*

oo as in *woo*. For this reason, also, all the Front vowels have a brilliant resonance, while that of the Back vowels is more sombre in quality. (See Vowel Tables I and III, p. 156.)

Again, although the pitch of a vowel resonance is independent of the pitch of the fundamental sound made by the vocal cords, it does play no inconsiderable rôle both in speech and song by reinforcing or diminishing the tones of the voice and modifying the quality or timbre of the same. For this reason one may speak as well as sing "off the key." Many Americans "sharp" their speech tones by decreasing the size of the vowel chamber to a mere *slit*, thus raising the pitch of their vowel resonances and producing the high, penetrating timbre known abroad as "the American voice." The English, on the contrary, rarely *shrill* thus, and although they do sometimes "flat" or deaden the timbre of the tones by lowering the pitch of their vowel resonances, it is a fault so much less noticeable, as well as less disagreeable in conversation, that it does not per-

ceptibly mar the great beauty of their speaking-voices, especially as they never force the vibrations of the vowel into the resonators of the face mask with the vibrations of the tone, as their transatlantic cousins are apt to do, thus giving a nasal quality to the voice, which, together with the high pitch and penetrating timbre above referred to, has made the American speaking-voice a national reproach. (Although this faulty production of the speech tone and vowel resonance is common chiefly to the inhabitants of provincial New England, the Middle West beginning at Philadelphia, and certain Northwestern and Southwestern States, the minority in the East, like the softer-voiced people of the South and certain parts of the Pacific "slope," hardly makes itself heard in the general clamor of the "Vox Americana.")

There is, of course, no fixed standard of pitch for the vowel resonances (see "Notes and References," page 317, III), hence there can be none for the speaking-voice. In fact, since the resonances vary according to the size and shape of the vowel chamber, which in turn

depends, to a certain extent, upon the *conformation* as well as the adjustment of the organs of speech, and as the conformation is never exactly the same in any two persons, it is inevitable that each individual should have an individual gamut of vowel resonances. The key-note to this natural gamut of resonances is found, however, in *the whispered resonance of the Natural Vowel*, or the resonance of the vowel chamber with the tongue in its normal position, and without any readjustment of the other organs of speech, except the dropping of the lower jaw necessary to open the chamber properly. The speaking-voice may be made exquisitely musical, beautiful, and expressive by thus securing its normal *pose* and regulating its inflections and modulations according to the natural intervals furnished by the speaker's normal gamut of vowel resonance. Indeed, with proper training *based on the control of vowel resonance through proper control of the tongue*, any voice, unless marred by a positive deformity of some organ of speech, may be made harmonious and agreeable if

not actually beautiful. Miss Ellen Terry's delightful voice, for example, has not a beautiful natural quality. It is slightly husky, just the sort of voice indeed which, if carelessly used, tends to grow coarse and unfeminine with age; but so perfect is the adjustment of her speech tones and vowel resonances, so skilfully does she play upon the natural pitch and intervals of the latter, that the peculiar quality has become a peculiar fascination, adding a distinct and individual charm to her speech.

It is the perfect and perfectly sustained line of resonance in the voice of Signora Duse that gives to her speech its rare charm, its marvellous power to hold the attention and play upon the emotions of all her hearers, even those to whom she speaks in an unknown tongue. Along this vital, vibrant line her every thought and emotion seems transmitted straight to the mind of the listener, independent of the words she utters. At a recent performance of *La Gioconda*, in Berlin, the writer heard her sustain this line of resonance, *sotto voce*, throughout a long speech

made by the lover, thus conveying to the audience a whole gamut of varying emotions—joyous, tender, proud, protesting—without the articulation of a single syllable until, with the ceasing of the man's voice, the resonant murmur culminated in the sonorous Italian "*No, no, non dir' più!*" One may even dare to predict that as long as this great artist can speak at all she will speak beautifully. The volume and strength of the speech *tones* may diminish with her bodily forces, but the beauty of the voice, being due rather to the vowel harmonies obtained from the resonators above the larynx than to the quality of the tone produced by the vocal cords, will retain its peculiar power and charm until her tongue is forever silent.

The writer is convinced that many promising male singing-voices of angelic purity and beauty have been lost to the world for mere lack of proper readjustment of the vowel resonances to the speech tones, at the time when a change in the vocal cords produces an inevitable change in these funda-

mental or "cord" tones. Indeed, proper development and use of the natural gamut of vowel resonances in speaking is not less important for the singer than for the speaker. The laws of resonance render it inevitable that an incorrect pose of the voice and habitual use of faulty speech tones and vowel resonances shall have a corresponding effect upon the voice in singing. The singer who habitually pitches his speaking-voice below the natural pitch of his gamut of vowel resonances, for example, is sure to find himself "out of voice" often, and nearly always has to "key himself up," so to speak, to his vocal work, for *correct use of the speaking-voice alone can keep the resonators above the larynx always "in tune."*

Thus we see that aside from all consideration of the importance of the word, as the vehicle of expression for poetic thought, diction can never be treated as a negligible quantity in the singer's art. Since it is a demonstrable fact that the resonance of the vowel either augments or diminishes the resonance of the tone, it follows that if the

diction does not distinctly enhance, it must distinctly mar the beauty of the tone-production. The singer may, indeed, set it down as an axiom that perfect beauty of tone can only be attained by perfect adjustment of these two resonances; and since the resonance of the vowel depends upon the size and shape of the vowel-chamber, it follows that *this perfect adjustment depends chiefly upon the position and motions of the organs of speech, especially the tongue.*

The special aim of the writer during years of study and experiment with singers and speakers of four nationalities — English, French, German, and Italian—has been to ascertain the correct position of the organs of speech, particularly of the tongue, for each of the independent vowel sounds in these four languages. By the correct position is meant that which will give the purest and fullest vowel resonance, when subjected to the final test of vocalization, with satisfactory results as regards both word and tone. It is possible, of course, to produce something resembling each of the vowel

sounds by various adjustments of the different organs of speech, but *if the position of the tongue be wrong*, the result will be either a bad tone or a blurred and indistinguishable vowel. For example, in singing what is generally known as the "long" sound of the English vowel *e*, as in the word *be*, the sides of the tongue should be at the highest possible point in the front part of the mouth, thus dividing the vowel-chamber in two compartments of unequal size, the back division being sufficiently ample to give depth and fulness to the resonance, to which the vibrations in the smaller front chamber add clearness and brilliancy (see Diagram III, page 173). This vowel may be produced, however, with a lower and less forward position of the tongue by narrowing the aperture between the lips, but the result will be a thin, shrill, colorless sound, because the back resonance has been destroyed by the alteration in the shape of the vowel-chamber, leaving the tone without depth or sonority.

The first step for both singers and speakers in the study of diction is to gain perfect con-

trol of the organs of speech through the *sense of touch.* The student must learn *to feel* the vowel forms and consonant motions while the ear is occupied in directing the tone. This is, in fact, just what all singers who acquire good diction eventually learn to do, though usually in the way that "Monsieur Jourdain" spoke prose: without being aware of the process, and only after long and painful groping with an untrained sense and inflexible organs. For this reason good diction is usually the last thing acquired by the singer, though not necessarily so, for there is no reason why it should not—on the contrary, every reason why it should—be acquired at the very beginning of the vocal studies. The work of singer and speaker along this line is identical up to the point where the voice work of the former merges into tone production proper, while the latter continues the study of speech-tones with the variations of pitch, inflection, rhythm, emphasis, etc., which constitute the music of speech. To both, the preliminary work in vowel resonance is of far greater importance

than is generally realized. The chief faults and difficulties of our public speakers and actors are not, as a usual thing, in elocution or dramatic expression proper, but in the very rudiments of speech—articulation, enunciation, syllabication, etc. To cite a single example, the artistic, dramatic work of one of the most gifted American actresses of the present day is so sadly blurred by a defective articulation, due to inflexibility of the organs of speech, that one misses many of her best lines entirely unless seated quite near the stage. Some attribute this to her tendency to speak too rapidly, but all who have heard Madame Bernhardt know how effectively the speed of speech may be increased in order to create a climax of emotional excitement without the loss of a single syllable, provided the artist has perfected her articulation, as every aspirant for the French stage is compelled to do before beginning the study of dramatic expression proper.

In fact, the control of *tempo* in speech, the artistic value of which has been demonstrated so vividly to the American public in

the dramatic work of Madame Nazimova, depends, *au fond*, upon correct syllabication, which, in turn, demands perfect control of the organs of speech, uniform development and flexibility of which is extremely rare and found, in the highest degree yet attained, among the Russians and the French. For this reason the Russians speak all foreign languages with more ease and fluency and with less "accent" than any other nation; while the French, as a race, speak their own language with more finish and distinction than any other people. Foreigners of all nations may safely intrust the accent of their children to the simple French *bonne*, but woe to those who accept with equal confidence the vernacular of the English serving class, whose accent, whether "cockney" or provincial, seems never to be mitigated by a lifetime of service with the most cultured employers. The marked inflexibility of the organs of speech characteristic of English-speaking people of every class, on both sides of the Atlantic, is of itself sufficient to account for the monotony in the *tempo* of the

speech of our actors, in contrast with the brilliant *tours de force* of the great Russian actress.

This necessary preliminary training is even more neglected by singers than by public speakers, owing to the fact that so many vocal teachers regard diction as merely a part—and too often as an unimportant part—of tone-production; whereas *diction or word-production is an entirely separate and distinct process, which must be perfected apart from the tone-production before the two can be satisfactorily combined into song.*

III

THE STRUCTURE OF SPEECH

THE chief faults and difficulties of speech, especially such as beset public speakers, singers, and adults who endeavor to acquire a foreign language, or perfect the so-called accent of their own, are due either to *ignorance of the phonetic structure of language*, or to *inflexibility of the organs of speech.*

Having learned to speak in infancy—as all children learn language—by ear, in imitating the sound of the speech of others, most people really know even their own language *by its sound alone*, whereas sound is but one of the *three* constituents of speech. This is demonstrated beyond all cavil by the fact that speech is perfectly intelligible to an educated deaf-mute, who does not hear its sound at all. To him speech becomes

visible—he reads language by the positions and movements of the organs of speech; whereas it is quite impossible to make speech intelligible by imitating its sound alone, as those singers who have not gained control of the mechanism of their speech demonstrate to us daily by their inarticulate vocalization.

Those who have read Mrs. Andrews' story *The Bishop* will perhaps remember the amusing version of the hymn *Am I a Soldier of the Cross?* rendered by the child heroine as she heard it sung in church:

> "Am I a shoulder of the hoss,
> A quarter of the lamb."

If the reader will listen carefully to the words of any selection new to him, as rendered by the average church, concert, or oratorio singer, and write them down *exactly as he hears them*, the result will probably be equally as unintelligible, if not so amusing, as the interpretation of Mrs. Andrews' clever little heroine.

It is, indeed, only when we attempt to sing,

and thus adjust the positions and motions of the organs of speech to sustained vocal tones instead of ordinary speech-tones, or to acquire a foreign language, in which these motions and positions are different from those of our native "tongue," that we begin to realize our ignorance of the scientific principles of speech and the importance of gaining perfect control of its mechanism.

The fact that children learn to speak foreign languages with ease and facility "by ear" has led to the erroneous assumption that this is the normal and proper method of acquiring a good accent, and upon this assumption have been based various so-called "natural" methods, which are entirely *unnatural* for the adult student. Even in the case of children, according to Doctor Bell, "this faculty of imitation becomes almost inoperative *after the earliest years*." Among the many instances corroborative of this fact which have come under the writer's observation she will cite but one—that of two American children from one of the Northwestern States who had been placed *en*

pension with a French family in Paris. The younger child, a girl of nine, was acquiring the language with a perfectly pure accent, while the other child, a boy only a few years her senior, had learned to speak it with even greater facility but with exactly the same "Western" accent that characterized his English, *burring* the *r* and even adding the *burr* where there was no *r;* pronouncing both *le* and *leur* as he pronounced the English word "slur"; *feu* "fur," *deux* "dur," etc., just as he had been in the habit of transforming *Mama, Papa,* and *Hannah* into "Mammer," "Popper," and "Hanner."

A few linguistic experiments proved to his mystified French governess that the difficulty was not due, as she fancied, to the boy's "dull ear"—which was indeed a far more musical and accurate one than that of his sister—and that he heard well enough the difference in her accent and his own, but was unable to repeat accurately what he heard *because of the greater inflexibility of his organs of speech.* Certain simple exercises in articulation based on the action of the

tongue, which greatly amused the boy, soon extracted the *burr* from his French and mitigated the same in his English sufficiently to prove that only patient exercise of the correct action of the tongue was necessary to eliminate his Western accent entirely.

A little careful attention of this kind, given in time to the mechanism of the speech of children who exhibit a tendency to lisp, stutter, or stammer, is sufficient to prevent the development of those painful defects of speech, unless due to some definite physical deformity. Lisping is merely the confirmed habit of advancing the tip of the tongue too far in articulating the sibilant consonants. Children who are allowed to hesitate upon or repeat the initial consonant of a syllable or word are sure to stutter, while those who acquire the habit of enunciating on the inhalation of the breath, instead of during its exhalation, inevitably develop the more serious and stubborn defect of stammering.

In the same way, both the cause of and the remedy for all so-called "accent," whether local, provincial, national, or foreign, are to

be found in the *mechanism* of the speech—that is, in the action of the organs used in the production of language, *especially the tongue*. Therefore, the preliminary work of the student of diction consists in gaining perfect control of this mechanism. In order to do this he must understand the organic structure of speech, and that knowledge he should gain by careful observation and analysis of his own.

Standing before a mirror, let him enunciate naturally but slowly and distinctly a brief, simple sentence in his native language; afterward let him sing or intone a phrase. He will thus find that he not only hears, but *sees* and *feels* his speech. In other words, he has demonstrated for himself the basic principle of the science of speech—that language when spoken or sung consists of three distinct elements: *form*, *motion*, and *sound*.

Taking these elements in the order of the structure of speech, we have, first, *sound*, which originates in the larynx, the delicate musical instrument attached to the base of the tongue, at the back, containing the vocal

cords, by means of which the breath is set into vibration or vocalized, the sound thus produced becoming a speech-tone or a vocal note according to the approximation of the cords. When this fundamental tone issues from the larynx, it is divided into two streams or currents by the pendent veil of the soft palate. One of these streams of vocalized breath passes over the palate into the hollow chambers of the head and face, where, before issuing from the nostrils, it is reinforced by additional vibrations, producing what is known among singers as "head resonance"; while the other stream flows directly into the mouth, where the vibrations of the tone under the arch of the palatal vault are communicated, through the soft palate, to those in the face mask above, producing full palatal resonance.

At the same time, another and entirely separate process is taking place in this lower chamber, where, as we have already seen in the preceding chapter, the vibrations of the breath produce an additional series of resonances varying in character according to

the shape of the chamber, and called the vowel sounds.

When, during the emission of the tone, the adjustment of the organs of speech changes so as to bring one in contact with another, the result is a *consonant* (con sonare) —the *motion* "with the sound"—which, together with the vowel and the fundamental tone, completes the organic structure of speech.

With the first process, the production of tone *as it is used in singing*, the student, even though a singer, should not concern himself in the study of diction. Complete control of all the resonators above the larynx—which is quite as necessary for beauty of tone in speech as in song — can be obtained by simply *intoning* on a stream of pure resonance (see page 271), and perfect adjustment of the vowel resonances to the speech-tone or vocal note thus secured without any strain upon the vocal cords.

Indeed, it is by thus separating the two processes of word-production and tone-production, and gaining complete *conscious* con-

trol of the two streams of the breath, that one can most readily and perfectly master the *single continuous line of resonance* upon which the voice is projected and sustained in public speaking and singing, and by means of which perfect adjustment of the vowel resonances to the speech-tone or vocal note may be secured without the sacrifice of either word or tone, provided always that the organs of speech are properly trained for the mechanical process of providing a *resonator* of the correct size and shape.

The erroneous idea that vowels are produced in the larynx has been the source of incalculable injury to that delicate organ in the case of both singers and speakers. Sound—inarticulate, fundamental *tone*—alone originates in the larynx (see "Notes and References," page 316, II). Absolute proof of this is found in the fact that it is impossible to *hum* a vowel. Although, when the lips are closed, the entire column of vocalized breath passes directly from the larynx through the nostrils, no sound even remotely resembling a vowel can be produced on this upper stream

of resonance. If the reader is not convinced by this test, he has only to make an effort to enunciate the different vowels while holding his tongue down firmly in the mouth by means of a broad, flat paper-knife or the handle of a large spoon, and he will find that it is a physical impossibility to produce thus the sound of any vowel except a hollow, "broad" *a*—the natural position of the tongue for that vowel being *low* in the *middle*, as he is holding it.

There should never be any *conscious* action of the larynx or muscles of the throat in speaking. The moment a speaker thinks of his throat the speech-tones lose their natural focus, the tongue stiffens at the back, throwing an unnatural strain upon the larynx, contracting the pharynx, and producing a hollow tone of a specious mellowness but without resonance or carrying-power, which sooner or later develops a husky quality, and, in the case of speakers who use the voice constantly, is apt to result in chronic laryngitis, pharyngitis, or "clergyman's sore throat."

In the case of singers the results are even

more disastrous. With the production of the singer's tones, however, we have absolutely no concern in the study of speech. Experiments with the whispered vowels, and the scientific reproduction of the complete "curves" of the speaking-voice, already referred to (see pages 4, 26, 49), have proved beyond all doubt that the tones made in the mouth are *free* vibrations, added to the fundamental tone made by the vocal cords. As these resonant tones cannot be distinguished by the ear in normal speech or in song, they cannot be controlled through the sense of hearing. The office of the ear is, in fact, that of *critic* of the complete vowel harmonies, and, like any other critic, it can only judge and compare finished performances; or, at most, like the director of an orchestra, regulate the *ensemble* of the sounds produced by the different instruments. In short, as we have already said in a previous chapter — but cannot too often repeat or too clearly emphasize — diction and tone-production are *two separate processes carried on at the same time*. Hence we shall confine ourselves in

this work to the study of the technique of *speech* alone. It is sufficient for the student of diction to know that he has in his throat a delicate musical instrument called the larynx, which contains the vocal cords and is attached to the base of the tongue at the back; that no muscular strain must be placed on this frail, sensitive organ, which is self-acting, and will, if the breath be properly controlled and the organs of speech correctly adjusted, produce the speaking-voice *automatically* and *correctly*.

The subject of breath-control is one of great importance to both singers and speakers. In the case of the former, it is, of course, the affair of the vocal instructor. All actors and public speakers, even those who do not care to sing, should take at least a few lessons in breath-control from a competent teacher who has a scientific and well-tested method of developing the diaphragm and other muscles used in controlling the breath.

For correct use of the speaking-voice, even in ordinary conversation, certain "breathing

exercises" are often necessary in order to secure proper vocalization of the breath and full command of the resonator, on which the beauty of the speech-tones so largely depends; but these should be taken only under the personal supervision of the teacher, as they must be varied to suit the needs of each individual, according to the development of the muscles used in respiration and the habits of breathing already established. The respiratory system is, indeed, so closely connected with many of the vital functions of the body that most disastrous results, both physiological and psychological, may result from the misunderstanding or the misapplication of even the best system of breathing exercises.

The first and most important work for the student of diction—whether speaker or singer—is to gain perfect control of the mechanism of his speech, *apart from its sound or speech-tones*, by which alone he has heretofore recognized and controlled the same, through the sense of hearing. In order to do this intelligently, he must understand the

tilting the head backward, the proper adjustment of the resonators is interfered with; if lowered by tilting the head forward, the lower jaw is crowded back against the throat, compressing the larynx and interfering with the proper emission of the tone.

The lower jaw cannot be properly classed either with the active or the passive organs of speech, its office being merely to open the vowel-chamber, which is accomplished not by the action, but by the *relaxation* of the muscles that control its movements. It is never used actively in Italian or French, and in German and English only for the articulation of the initial or consonant form of *y*, as in "*ya*," "yes," "yacht," etc. If it be allowed to move with the tongue in making the vowel forms, the result is the fatal habit of "mouthing," which so marred the diction of the greatest English actor of modern times. Regarding the lower jaw, then, merely as the door of the vowel-chamber, so to speak, the singer or speaker has only to see that its hinges are kept in good working order, an accomplishment which is

extremely rare, and seems strangely difficult for English-speaking people. Milton attributes this fault, peculiar to English speakers and singers, to the severe climate of their native island, fear of the effect of the cold northern air upon the throat and lungs causing them to speak "too close and inward," as he aptly phrases it.

Whatever the cause of this habit, the effect on the speech is undeniable, not only in the case of English people but of Americans as well—though with a difference greatly in favor of the former as regards the speaking-voice, and equally in favor of the latter in singing. As a natural result of this *close and inward* speaking, the voice, instead of being properly posed in the front part of the vowel-chamber under the centre of the palatal vault, is forced backward; in case of the English the soft palate is thus brought into play as the chief resonator, greatly diminishing the resonance and carrying power of the tone, but giving a peculiar sweetness and charm to the speaking-voice, "gentle, soft and low," which all the world recognizes as

a most "excellent thing" in the country-women of Shakespeare—for conversational purposes. On the more "strenuous" tongue of the American, both the vowel resonance and the fundamental or cord tone are forced over the soft palate into the face mask, greatly increasing the resonance and carrying-power of the voice, but depressing the veil of the palate, and thus giving a nasal quality and penetrating timbre to the speech-tones which have made the American speaking-voice a national reproach. But whether English or American—Northern, Southern, Eastern, or Western—we all speak "too close and inward," and the student of diction, whether singer or speaker, whether studying to acquire foreign languages or to perfect his own, must, first of all, correct this fault *by learning to open the mouth properly*. This can only be done effectually by gaining co-ordinate control of all the organs of speech, beginning with the tongue, of which we shall treat at length in the succeeding chapter.

IV

THE TONGUE

Speak the speech, I pray you, as I pronounced it to you, trippingly on the tongue; but if you mouth it, as many of your players do, I had as lief the town crier had spoken my lines.

—*Hamlet*, Act III, Scene II.

THE writer once asked a popular teacher of dramatic expression what he considered the exact idea in regard to speech, which Shakespeare intended to emphasize in the above oft-quoted instruction given by Hamlet to his players.

"It is embodied in the word 'trippingly,'" he replied, and proceeded to explain how this effect was to be obtained by proper use of the lips and jaw, combined with variations of speech tones, pitch, inflection, emphasis, etc.

"Then you find no special significance in

Shakespeare's use of the phrase 'on the tongue'?" I continued.

"Certainly not, except as the most natural expression with which to round out the sentence, since it goes without saying that all speech is *on the tongue*."

The fact has, indeed, gone so long "without saying" that it has ceased to have any significance at all. Because the tongue is so indisputably the chief organ of speech, we have, by some strange logic, arrived at the conclusion that it needs no training whatever for its important function. The student is taught to "trip" with his lips, his jaw, his facial muscles, his larynx, his diaphragm—with everything, in fact, except the organ that nature intended him to trip withal, and as an inevitable result he minces or blurs his vowels, mouths his consonants, and "elocutes" generally to such an extent that beautiful *natural* speech is about the last thing one is likely to hear from an aspirant for the stage or the rostrum. What would one think of a manager who should give all of his attention to the setting of his

play and the training of the "supports" for their minor rôles while paying no heed whatever to the chief actor, who, just because he *is* the "leading man," is supposed to need no practice for his own lines, exits and entrances, gestures, attitudes, or "business"? Yet that is just what happens to the student's speech when the training of the tongue is slighted in the study of diction. When we consider that thirteen of the twenty-one consonant motions employed in English are made by the tongue, while all the resonances which constitute the vowel gamut of the language are regulated by the position of that organ—aided, in the case of the six back vowels only, by the action of the lips—we begin to realize to how great an extent the finish and beauty of speech, as well as distinct articulation and clear enunciation, depend upon the strength and flexibility of the tongue.

In fact, we may be quite sure that Shakespeare meant exactly what he said to the actors of his day in the words he put into the mouth of Hamlet—that to speak well,

or "trippingly" if you will, one must speak literally and carefully *on the tongue;* and he leaves us no doubt of the inference that if one does *not* so speak, the result will be the mouthing with which his hero had so little patience.

This scientific fact was strikingly illustrated in the case of Sir Henry Irving. The habit of *mouthing*, which marred the diction of that great actor, has generally been set down to mere affectation or mannerism. But no careful student of the science of speech—even though he were not convinced, as the writer is, that so great and conscientious an artist would never deliberately stoop to such superficial means of accentuating the effect of his art—could fail to remark that the habit was due to a defect in the *mechanism* of Sir Henry's speech. Even from the audience it could be plainly seen, by aid of a strong opera-glass, during the slower and more deliberate passages of his speech, that the size and shape of the vowel-chamber were regulated, to a great extent, by variations of the orifice of the vowel-chamber rather than

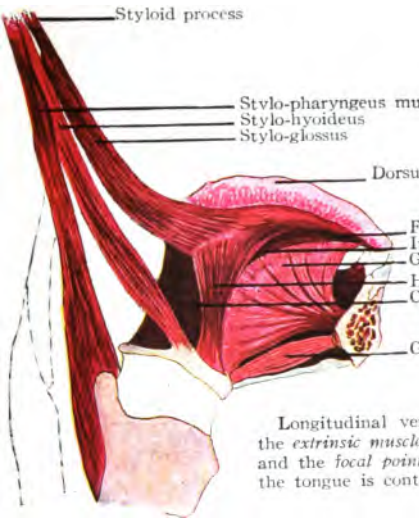
by the position of the tongue; while, during the more rapid passages, the action of the jaw and lips became so labored as to amount at times almost to grimacing, proving beyond all doubt an unusual weakness in the *intrinsic* muscles of the tongue, which the great artist unconsciously—or consciously, if you will—but certainly most conscientiously endeavored to supplement by increased activity of the other organs of speech, with the inevitable result of "mouthing" his lines. It was equally inevitable that the habit of thus changing the size and shape of the vowel-chamber during the emission of the vowel sound should cause an exaggeration of the secondary resonance of the English *mixed vowels*, and add a slight suggestion of this secondary resonance even to certain pure vowels, which habit led to such unfair criticism of his diction as the exaggerated statement, seen by the writer from the pen of a London critic, to the effect that there was not a really pure vowel in Sir Henry's entire vocabulary.

Having satisfied himself, by observation

and experiment, that purity of enunciation and precision of articulation depend chiefly upon the strength and flexibility of the tongue, the student may set it down as an axiom that the amount of strength and flexibility necessary to secure this purity of vowel *form* and precision of consonant *motion* in ordinary conversation is not sufficient to maintain the same in singing or even in public speaking. In the case of the singer especially, it is a difficult and delicate task to maintain the position of the tongue necessary to secure a full and clear vowel resonance with the jaw in the position demanded for correct emission of the tone, without interfering with the poise and freedom of the larynx.

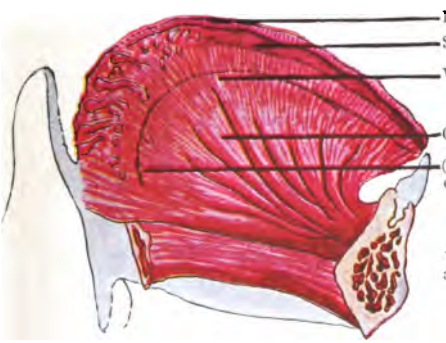
Sir M. McKensie has well said that the singer must be an athlete as well as an artist, and we may add that he can only gain the muscular strength and flexibility necessary for the difficult and delicate feat of singing speech in the same way that other athletes gain theirs — by systematic training and development of the muscles used.

FIG. II



Longitudinal vertical section of the tongue, showing the *extrinsic muscles*, part of the ***inferior lingual muscle***, and the *focal point*, from which the muscular action of the tongue is controlled in the processes of speech.

FIG. III



Longitudinal vertical section of the tongue, showing the ***intrinsic*** muscles and fibres and the genio-glossus.

FIG. IV

Coronal section of the tongue, showing the *transverse* and *vertical fibres* interwoven with the fibres of the ***intrinsic muscles*** and the *cortex*, or border, with which the vowel "forms" are made.

To this end it is necessary that the student should understand something of the organic structure and the action of the tongue, which is a most complex and delicate piece of mechanism, perfect control of which is extremely rare, and of the greatest importance both in singing and in speech.

Accepting as the basic principle of the mechanism of speech the postulate deduced from the laws of resonance, that language when spoken or sung consists of *two separate processes* carried on simultaneously—word-production and tone-production—the writer was led to the natural conclusion that these two processes must be controlled by different sets of muscles. Careful study of the anatomy of the organs of speech reveals the existence of just such a double mechanism in the *intrinsic* muscles—those composing the body of the tongue (see Figs. III and IV), and the *extrinsic* muscles connecting that organ with the larynx, the pharynx, and other surrounding parts (see Fig. II). Actual experiment and demonstration with the writer's own pupils soon convinced her that the proc-

esses of articulation, or word-production proper, are performed entirely by the *intrinsic* muscles and fibres of the tongue, controlled subconsciously through the sense of touch; the *extrinsic* muscles being used only in the processes of eating and drinking, and to assist the action of the muscles of the larynx and pharynx in the production of *tone*, which, alone, is controlled directly through the sense of hearing.[1]

Such is, at least, the normal, involuntary action of the tongue in ordinary speech. The slight muscular effort thus required is not, however, sufficient to maintain the shape of the vowel-chamber against the increased

[1] In support of this theory, the writer offers the following statement made by the late Sir Richard Quain, the eminent English anatomist, as full and sufficient authority for the postulate upon which her exercises for the tongue are based: "In addition to the movements that may be given to the tongue by the *extrinsic* muscles, that organ is capable of being curved upward, downward, or laterally by its cortical fibres; it is flattened by the vertical fibres, and its margins are drawn together by the transverse fibres, while the two last mentioned, acting together, would tend to lengthen the organ."—Quain's *Anatomy*, Vol. III, Part IV, p. 11.

force of the vibrations of tone necessary to project and sustain the voice in public speaking or singing; hence, unless the *intrinsic* muscles are strengthened for this supernormal effort by proper exercise, the *extrinsic* group will be brought into play involuntarily to aid them, stiffening the back of the tongue, causing rigidity of the larynx and pharynx, and thus preventing either a free emission of the tone or distinct enunciation of the word.

In order to avoid this wrong use of the muscles, the pupil must, first of all, rid his mind of the vague and erroneous idea, so strangely prevalent among vocal students, that the tongue grows out of the throat and is controlled from the back! By referring to Fig. I, Frontispiece, he will see that the tongue springs, not from the back or throat, but from the *front* wall of the lower jaw, the fibres of the principal muscle spreading upward and outward like an open fan, to the tip at one end and the hyoid bone at the other.

It is, in fact, a physical impossibility to

control the movements of the tongue from the back; any effort to do so—such as the attempt to hold the tongue down at the back in singing—merely stiffens the *extrinsic* muscles, by which the tongue is connected with the larynx and pharynx, and throws a corresponding strain upon the muscles by which the vocal cords are tensed, resulting in so-called "tightness" of tone. Indeed, muscular rigidity of the back of the tongue (*which forms, be it remembered, the front wall of the throat*) is perhaps the greatest obstacle encountered by the vocal instructor in obtaining a free and full emission of the voice, and is also the chief cause of a legion of throat troubles common to public speakers, actors, teachers, and all who use the voice in sustained speech.

If, on the contrary, the tongue be held down at the *front* during the processes of speech in singing, leaving the back entirely relaxed, not only is perfect poise and free action of the larynx secured, but all tension upon the pharynx is also released, giving the open throat so necessary to secure the full res-

onance of the voice and command of those subtle shadings of expression which, for lack of a better word, singers call tone "coloring," and which, according to Doctor Aiken, are produced by the resonance of this "chamber in the neck."

If the reader will place the tips of two fingers well under the front of the tongue, and hold them there without pressure, while enunciating clearly the vowel *a* (as in *father*), he will feel distinctly a forward and downward motion *of the under side* of the tongue. This movement is made by the *inferior lingual muscle*,[1] and here, under the front of the tongue where the fibres of this *intrinsic* muscle are blended with the *extrinsic* muscles connecting the tongue with the larynx and

[1] The inferior lingual muscle (see Figs. II and III) consists of a rounded muscular band extending along under the surface of the tongue from base to apex, lying outside the genio-glossus, between that and the hyo-glossus. Posteriorly, some of its fibres are lost in the substance of the tongue and others reach the hyoid bone. In front, having first been joined, at the anterior border of the hyo-glossus muscle by fibres from the stylo-glossus, it is prolonged beneath the borders of the tongue as far as its point—Quain's *Anatomy*, Vol. III, Part IV.

pharynx, thus uniting the two mechanisms, is the FOCAL POINT (see Fig. II), from which the action of that complex organ is controlled in speaking; the natural *point d'appui* in singing, from which alone the two processes of word-production and tone-production can be perfectly adjusted without the sacrifice of either word or tone.

In groping for this point of support without proper training of the tongue for the processes of speech, the singer is apt to stiffen the jaw, the back of the tongue, or, worse still, the *superior lingual muscle* (see Fig. III), with which the vowel forms are made. Some singers succeed in securing this focal pressure partially by curling the tip backward *under* the tongue as far as possible; an illegitimate device, which merely serves to keep the tongue forward, and thus produce good *tone* in vocalizing *without words;* the tip, which is in constant requisition for lingual consonants, being thus put "out of commission," so to speak, entirely, so that whenever one of these consonants occurs in a word, it must be sacrificed to the tone, with the

result of blurred and unintelligible diction. When the focal pressure is properly made, however (by a *forward*, *downward*, and *lateral* pressure of the *inferior lingual muscle*), the tip is readily released for lingual consonants without greatly altering the adjustment of the other muscles, so that it may return instantly for control of the next vowel position. When thus correctly obtained, a slight exaggeration of the normal pressure, with the lower jaw well relaxed, will create the impulse to yawn, proving that the muscles of the throat are completely relaxed.

Having secured the correct focal pressure, we find that from this natural point of support the tongue moves freely in every direction. It can be raised or lowered; moved backward or forward; widened or narrowed; or it can make several of these movements simultaneously, without interfering with the action of the larynx or constricting the muscles of the pharynx, and thus preventing free and full emission of the tone.

In order to secure this perfect adjustment

of the organs of speech to the vocal organs, the vowel shapes must be made with the *side muscles* of the tongue, or, to speak more exactly, the fibres of the *cortex* or border surrounding the longitudinal muscle forming the top of the tongue (see Figs. III and IV), the centre of which must be left perfectly relaxed and free, from the tip of the tongue to the larynx, for the full emission of the tone-waves.

The character of each vowel resonance is determined by its *point of resistance*—that is, the point at which these side muscles are arrested and tensed to maintain the shape of the vowel-chamber during the emission of the speech-tone or vocal note, and by which the various vowel resonances will be indicated in this work. For example, in forming the vowel *e* as in *bed*, the side muscles of the tongue are raised and tensed against the upper teeth at a point midway between the front and back of the vowel-chamber, hence it is called the High Middle vowel; while for the *e* in *be*, the muscles rise and move forward, the point of resistance being felt just

behind the "eye" teeth, giving the High Front vowel.

We have used the expression *to feel* advisedly, for the correct vowel shapes can only be ascertained with any degree of certainty by the sense of touch.[1] Researches in the (physiological) psychology of speech have demonstrated the fact that the nerves controlling the motor sensations of the tongue

[1] For example, in order to maintain the point of support in singing the vowel *e* as in *bed*, the tip of the tongue must be held down firmly behind the lower front teeth, as in all vowel shaping, so that seen thus from the front the tongue *appears* to have the same position as in the vowel *a* as in *bad*, because the *point of resistance* of the latter coincides exactly with the *focal pressure*, making that downward, forward, and lateral pressure so marked that the tongue is forced to rise at the *middle* position. This fact misled even such an accurate phonetician as Doctor Bell, who classed them as the Low Front and Low Front Wide vowels. The reader has only to apply the test of vocalization ignored by Doctor Bell, or to intone the words *bed* and *bad*, alternately on the same note, and then the two vowels alone in the same manner, and he will soon feel distinctly that the *point of resistance* for *e* is at the *top*, while that for *a* is at the *bottom* of the vowel shape as seen from the front—that is, High Middle for *e* and Low Front Wide for *a*. For this reason the writer has given no diagrams illustrating the positions of the tongue as seen from the front.

are, in turn, controlled by the sensory nerves from its own and surrounding surfaces; so that in order to gain perfect mastery of that organ through the sense of touch, it is only necessary to repeat a given movement, with attention, often enough to establish definite associations between these sensory and motor "irritations." (See "Notes and References," p. 318 (d).) Such control once established, the movements become automatic, or at least subconscious; but, *having been gained consciously*, leave the speaker or singer master of the mechanical process, and able at any moment to resume conscious control of the same, in order to modify habitual movements—as in adapting the positions of the tongue for the various vowels to the change made in the size of the vowel-chamber in singing, or to acquire new positions and movements, as in learning a foreign language. On the other hand, the effort to control by the ear alone the vowel harmonies which are regulated by the movements of the tongue, is to ignore the cause and deal blunderingly with its

effects only. The fact that deaf-mutes are taught to speak intelligibly, with perfect articulation, and that their enunciation is rendered slightly disagreeable by the hollow and unnatural speech-*tones* only, is absolute proof that the tones made by the vocal cords alone, and not the action of the organs of speech, are controlled by the ear.

As we have said before, those singers who acquire the proper control of their speech in singing, unconsciously, do so only after long years of blind groping with an untrained sense and inflexible organs. There is, however, no reason why it should not be acquired at the very beginning of the vocal studies, since it merely depends upon the strength, flexibility, and *tactile sensibility* of the tongue, all of which may be developed by proper training of that organ. (See "Notes and References," pages 317–319.)

This is the legitimate work of the diction teacher, as it must be done with vocal organs absolutely relaxed, without any sound at first, and gradually adapted to ordinary speech-tones by means of the *line of res-*

onance alone. It is, in fact, the basis of the *technique of speech*, and bears the same relation to the singer's art that the muscular development of the hand does to the art of the pianist. It is, however, a much more delicate process, and should, if possible, be done under the personal supervision of a competent teacher with a well-tested system of physical exercises based on the principle of perfectly balanced tension and relaxation of the muscles.

The student of singing will find that such control of the speech processes and of the line of resonance (also dependent on the adjustment of the organs of speech) will lessen by one-half the time necessary to "place" and develop the voice; as well as the wear and tear on his own nerves and those of his vocal instructor through faults of tone-production, due—as so many of them are—to mere faults in the mechanism of speech.

V

THE VOWEL

THERE is nothing more difficult for a teacher or more misleading to a pupil than a definition. This is especially true in defining a vowel, the most mysterious and subtle element of language. It has as many facets as a rose-cut gem, each of which reflects some ray of truth concerning this vibrant, changeful soul of our speech. Hence it may be well to define the definition here offered as a consideration of the vowel from the standpoint of the structure or technique of speech.

Thus structurally defined, a vowel is the articulate vocal form or character given to the sound produced in the larynx by the addition of the vibrations which this fundamental tone receives in passing through the resonating cavity known as the mouth, or, in

technical phraseology, the *vowel-chamber*. As we have already noted, these additional vibrations create there a series of separate and distinct resonances varying in character and pitch according to the shape and size of the vowel-chamber, and giving to the sound of the human voice a special and individual music which differentiates it from that of all other living creatures. In fact, every (correctly) spoken or sung vowel is a complete harmony in itself, consisting of a fundamental tone made by the vocal cords; resonant tones produced in the vowel-chamber; and those mysterious *ignes fatui* of the human voice obtained from the resonators of the head and face, miscalled "over"-tones (being both higher and *lower* "partials" of the original tone).

These vowel harmonies are the basis of both speech and song. Any vowel may be made without tone, as the whispered resonances prove; but no tone, no real vocal note, can be made without some vowel sound. The writer once knew a child who talked, or at least made her needs and wishes understood, in this *vowel music* alone, without the

complete articulation of a single consonant, until her fifth year. This would, of course, be hardly possible in any language less flexible than English, with its wide gamut of vowel resonances, the numerous *mixed vowels* alone affording a great variety of inflections for the expression of feeling and emotion. It is, however, a striking illustration of the relative value of the vowel in the general texture of our speech. This case first revealed to the writer the existence of the continuous *line of resonance* upon which all speech and song are built, and the enormous value of using this sustained line as the basis of work in diction, in order to secure a musical and flowing rhythm in speech and a perfect *legato* in singing.

This vowel music varies in every language, embodying the genius of each nation, and bodying forth, in its harmonies or dissonances, its force or delicacy, its clarity or subtlety, that nation's characteristics of thought and feeling; reflecting, as it were, the very form and color of the human mind, so that it becomes no idle saying that he who learns a

new language gains a new soul. The greatest difficulty which attends the effort to acquire a foreign language or even to perfect one's own, arises from the fact that we have no adequate system of notation to indicate this varying scheme of vowel harmonies, the present system of notation used in the alphabets of the chief modern European languages remaining practically just as it was when adopted by the Romans from the Greek alphabet, the five original signs, *a*, *e*, *i*, *o*, *u*, being still made to do duty for the extensive gamut of resonances evolved by the progress of Western culture out of the five cardinal vowel sounds. (See Vowel Tables, and pages 157–185.)

If we attempt to count all the vowel sounds produced by the conjunction of the vowel resonances with the resonant consonants, the number is seen to be infinite, and as impossible to enumerate as the shades of color which an artist may produce by various combinations of the paints on his palette. If, however, we consider as independent vowels only those that can be enunciated distinctly

alone, without the aid of a consonant, the number of resonances becomes at once appreciable, and may be readily classified according to their vocal forms.

Thus computed, the modern European vowel gamut includes about forty different vowel sounds. No language, of course, contains the entire gamut of forty resonances. According to the system of classification used by the writer for the four languages chiefly employed by singers, Italian has only seven —or at most eight (see page 177); French, seventeen (see page 166); German, eighteen; and English, twenty independent vowel sounds.

As the vocal forms vary according to the size and shape of the vowel-chamber, which is regulated by the adjustment of the organs of speech, the first work of the student of diction is to master this mechanical process of vowel formation. Taking it for granted, if he be a singer, an actor, or a public speaker, that he has had the physical training necessary to secure the strength and flexibility of the organs of speech requisite for good

diction, including special training of the tongue as suggested in exercises given on page 261, he can now proceed to establish co-ordinate control of that marvellous organ with its complex double mechanism of intrinsic and extrinsic muscles and its exquisite tactile sensibility, by means of which the vowel-chamber may be moulded into varied and beautiful shapes as firm as those that drop from the Venetian glass-blower's tube and as delicate as the curled petals of a flower, into which the fundamental tones of the human voice are poured and from which they issue in definite, articulate vocal forms or vowels. In classifying these vocal forms by the position of the tongue for each, the writer makes use of the terms Front, Middle,[1] and Back to indicate the three positions between the lips and the pharynx, and the

[1] Doctor Bell employs the terms Front, *Top*, and Back; Doctor Sweet, Front, *Mixed*, and Back. But the writer has found it impossible to avoid confusion on the part of the pupil between the *Top* and *High* vowels of Doctor Bell and the *position* indicated by Doctor Sweet's *Mixed* vowels with the diphthongal character of the English mixed vowel resonances.

terms High, *Mid*, and Low for the three points between the top and bottom of the vowel-chamber, thus avoiding any confusion in the mind of the pupil in regard to the middle position in the two directions, and giving the following table of tongue positions for the primary vocal forms

High Front	High Middle	High Back	*Rounded by the lips.*
Mid Front	Mid Middle	Mid Back	
Low Front	Low Middle	Low Back	

The student should note carefully that all the *Back* vowels are to be rounded by the lips. This is necessary to give the requisite length to the vowel-chamber and to keep the tones forward, but he must not make the very common mistake of trying to *shape* the vowel by the lips. "The lips," says Doctor Bell, "*have no independent action in vowel formation. They only modify the effect of lingual action.*" While, in singing, the mouth must be kept well open and slightly rounded, in what the Italians call the *ore rotundo*, there is nothing more fatal both to vowel resonance and volume of tone than the habit of screwing the lips up into the form in-

dicated by certain French vocalists as *la petite bouche*. The singer particularly must note also that the *point of resistance* for the Back vowels is not at the back of the chamber, but *just back of the middle position only*, in order to keep the tone well under the arch of the palatal vault and to secure the full resonance of the vowel.

The number of vowel resonances is increased, as discovered by Doctor Bell in the development of his system of Visible Speech, by *widening* the tongue in each of the nine primary positions. In the same way, through the test of vocalization in her experiments with singers, the writer has found that another series of resonances are obtained by *narrowing* the tongue. This can be done only on the front and middle positions, however, as it is impossible to make the necessary movement on the back positions without altering the poise of the larynx. In thus narrowing the tongue on certain positions—by contracting the *transverse fibres* of the *superior lingual* muscle (see Fig. IV) toward the centre, while holding the tip well down

behind the lower front teeth—the student will be able to produce with accuracy the subtle distinctions between the resonances of certain vowels in different languages which seem to the foreign ear so nearly identical; for example, the Italian "closed" *e* and the French *é*; the French *u* and the German *ü*; the final *e* in German and the final *er* in English, etc.

The wide tongue positions abound chiefly in German and English, accounting logically for the breadth and fulness of the vowel quality characteristic of those languages, especially of the German. In French, on the contrary, the tongue is widened on two positions only, while seven of the sixteen or seventeen resonances composing the vowel gamut of that language are produced by narrowing the tongue, and thus giving the delicacy and *finesse*, at once so brilliant and so elusive, that is peculiar to the French vowel, and the despair of the (adult) German or English student whose tongue is habituated to the wider positions.

It is equally significant that with one pos-

sible exception (see Vowel Table II, and page 174), the Italian resonances are all produced with the tongue at its normal width, hence the uniform beauty of the Italian vowel and the ease with which it is sung.

Applying the table of primary vocal forms given on page 85 to the Italian language, we have the following remarkable distribution of the Italian resonances, giving one vowel sound for each *normal* position of the tongue—except the *Mid Middle*, which produces merely the vague unformed resonance of the "Natural" vowel, used only in English:

High Front.....	*i*	as in	s*i*
Mid Front.....	*e*	as in	c*e*na
Low Front.....	*a*	as in	m*a*ttina [1]
High Middle	*e*	as in	p*e*tto
Mid Middle	..		.....
Low Middle	*a*	as in	m*a*dre
High Back	*u*	as in	*u*na
Mid Back	*o*	as in	cr*o*ce
Low Back	*o*	as in	n*o*tte

Since all vowel sounds are produced by some modification of these nine primary vocal forms, it would seem, according to this

[1] See page 177.

distribution, that as the solar spectrum furnishes the basis for all possible shades of color, so the Italian vowel is the basis of all possible vowel resonances (except the English *Natural vowel*, which scarcely deserves to be classed with the more refined resonances of civilized speech, being merely the natural resonance of the vowel-chamber without any adjustment whatever of the organs of speech, and long ago eliminated from the speech of other refined and literary peoples). For example, the French *u*, a resonance peculiar to that language, is merely a modification of the Italian (or French) *i*, the tongue position (High Front) being exactly the same, but the resonance altered during its emission by a slight forward and "covering" movement of the upper lip; the great difficulty experienced by foreigners in acquiring this resonance being due entirely to the effort to produce the sound with the tongue in the position for the Italian or German *u*.[1]

[1] This fact may be readily demonstrated by the reader for himself (provided he speaks French without a foreign accent) by simply delabializing the vowel;

The French have added two, the German three of these *covered* or "modified" resonances to the modern vowel gamut, and the French have further enriched the scale of resonances with the so-called *nasal* vowels, produced by slightly depressing the veil of the soft palate during the emission of four of the pure French vowels, thus increasing the resonance of the *tone* with which the vowel is spoken or sung by increasing the pressure on the upper stream of the breath and giving an original series of vowels, each having a *double* resonance, one of which has a slightly nasal quality. (See pages 92, 166, 168.)

Finally, the English, by changing the position of the tongue during the emission of the vowel in seven instances, have produced a series of *mixed* vowels, each con-

that is, while intoning the French *u*, let him gradually withdraw the lips from the forward or "covering" position *without changing the position of the tongue*, when the resonance will change to that of the Italian or French *i*, the High Front Vowel (1). The same test applied to any covered or modified vowel will show—*is, indeed, the only reliable means of ascertaining* —the exact resonance upon which these vowels are based.

taining two resonances, of varying values, to the despair of foreigners of every civilized nation, and their own confusion in singing or in the effort to acquire the purer vowels of the modern Romance languages.

However, even the English-speaking student — although he be an American with vowels tortured out of recognition by the wildest "Western" *r*, obscured by a New England nasal "twang," or obliterated by a Southern slur—need not despair of singing or speaking his own or other modern languages with perfect purity, provided he has the patience to apply the principles of vowel resonance. He has only to train his tongue by proper exercises until he is able to maintain with ease the nine primary vowel positions with their wide and narrow variants, and to modify the vocal forms thus obtained by the action of the lips or the veil of the palate, as the resonance may demand; then to apply the strength and flexibility thus gained to the refining and perfecting of his consonant motions, as suggested on page 223. But first he must obtain perfect control of

the vowel resonances, which demands not only complete mastery of the tongue and other organs of speech, but equal control of the two streams of the breath. Above all, he should remember that the vowels must be kept on the *lower* stream, issuing directly from the mouth, even in the case of the French nasal vowels, so-called, in which the slight lowering of the veil of the palate permits a greater number of *tone* vibrations to pass through the resonators in the face mask with the upper stream of the breath, thus giving a *double resonance* to these four vowels, as already noted. In singing these so-called *nasals*, however, *great care must be exercised not to divide the stream of the vowel vibrations with the divided stream of the breath or tone.* If these vibrations are permitted to pass over the palate, not only is the peculiar beauty of these French vowel resonances lost, but the purity of the *tone* is clouded by thus blocking up its natural channel in the face mask; a fault into which foreigners singing French are very apt to be betrayed. Indeed, few French people, even, produce these vowels

well in singing, as any close observer may note from comparing the exquisite and delicate sonority of these double resonances as sung by the DeReszkes, Gilibert, and Plançon, for example, with the pinched nasal sounds produced by the majority of French singers. A similar treatment of the English mixed vowels is the cause of the distressing nasal "twang" heard in the speech of so many Americans.

In short, the primary requisite for purity of vowel in all languages is that *the vibrations producing the vowel resonances shall be kept in the vowel-chamber and emitted thence upon the lower stream of the divided breath.* To this end the student should test his vowel resonances by intoning the five cardinal vowels (see page 94) on a single note, while holding the nostrils firmly closed between the thumb and first finger, until the resonance of each can be emitted clearly through the mouth without any nasality or muffling of the sound.[1]

[1] The vowels alone can be enunciated thus, of course, as the closure for any resonant consonant demands a

To render less perplexing the inevitable confusion arising from the fact that we have only the five original signs, *a*, *e*, *i*, *o*, *u*, to represent the entire gamut of forty vowel sounds considered in this work, each vowel is here indicated by the position of the tongue producing that resonance. When the student has learned, for example, to think of the five cardinal vowels (those having the same resonance in the four languages here considered), as the Low Middle, High Middle, High Front, Mid Back, and High Back vowels, not only does he thus avoid the confusion resulting from the habit of asso-

flow of the upper stream of the breath. If the reader will intone the words

"Come, oh come with me, the moon is beaming,"

with the nostrils thus closed, he will find that only the consonants suffered violence at the nose of the unfortunate swain who, according to a familiar story, went serenading his mistress with a cold in his head, warbling forth

"Cub, oh cub with be, the bood is beabig,"

and he will further demonstrate that what is often termed "nasalizing" the vowels is, in reality, the opposite process; or, as in this case, the *de*-nasalizing the consonants.

ciating each of the five vowel signs with the special sound given to it in the alphabet of his native language, but he is, at the same time, reminded of the adjustment of the organs of speech necessary to produce the resonance correctly. The additional labor and confusion of acquiring a phonetic alphabet is also thus done away with entirely.

Numbers being the only written symbols common to all modern languages, the writer has made use of the same in formulating the Vowel Tables, as first suggested by Doctor Bell in one of his early works on phonetics. But these are only given for the convenience of the pupil in distinguishing the resonances peculiar to any one of the four languages from those common to two or more. He must, from the first lesson on the vowel, endeavor to *feel* the position and adjustment of the tongue and the other organs of speech as described, in the chapter on the vocal forms. When this tactile sensibility has been fully developed the singer will feel his vowels in his mouth as bubbles of vocalized breath of distinct forms, varying in size and shape

according to the position of the organs of speech. They are, indeed, fashioned in the same manner as are the soap-bubbles that a child blows through a pipe, and they must be held as gently and steadily, and allowed to float out on the lower stream of resonance as lightly as those aerial shapes created by the child's breath. The slightest convulsive movement of the organs of speech or any undue breath-pressure will instantly shatter these delicate creations; but if properly moulded and *breathed forth*, the distance to which they carry intact will be limited only by the amount of resonance with which the fundamental tone on which they are borne is reinforced.

VI

THE CONSONANT

"THE name consonant," writes Doctor Bell, "if held to imply an element that cannot be pronounced without a sonant, or vowel, would be a misnomer . . ."

This fallacy, so prevalent among students of speech, is due to the fact that while the consonant is an element, or factor, of language as individual in character as the vowel, it is not so *independent* of the other two elements of speech, so that there is in reality no contradiction in the apparent paradox with which Doctor Bell concludes his definition of the consonants as "the articulations, or joints, on which vowels and syllables turn."

It is, indeed, as a *process* only that we can arrive at an intelligible working definition of this vague and elusive element of speech

which, together "with sound" or tone, and vowel resonance, constitutes articulate language.

This process has been variously defined as the manner of opening and closing the vowel-chamber; as the conjunction and separation of two of the organs of speech; as a motion by which one of the organs of speech is brought in contact with another, etc. But neither of these definitions can be said to define *w* or *h*, while the last excludes also the initial *y*. We shall, perhaps, come as near a complete definition as is possible by considering the consonant as a motion of one or more of the organs of speech for propelling or checking the sound of the vowel. Even thus we do not include the aspirate (*h*) unless we consider the diaphragm and glottis among the organs of speech, as we conceivably may —must, indeed, in this instance.

In any case, whatever else it may or may not be, the consonant is undeniably a *motion*, and as such, primarily, it must be studied, in order to be properly refined and perfected. The finish and beauty of speech and song de-

pend, to no small extent, upon the precision and delicacy with which these movements are made. If they are lacking in precision, the result is a slurring of the enunciation, which is the chief defect of the otherwise refined and agreeable speech of educated southerners of all climes; such as the omission of *r* before another consonant by the dwellers below the old "Mason and Dixon line" in the United States, and their dropping of final consonants — a habit they indulge in common with their cousins of southern England; the blurring of many consonants on the tongue of the natives of South Germany; the *sh* sound given to *c* in Tuscany; the complete aspiration of the same consonant by the illiterate or careless Florentine; and the general soft slurring of nearly all the consonants in the mellifluous Venetian dialect.

If, on the contrary, the motions are made with precision, but without *delicacy*, the result is a coarseness and crudity of accent such as one hears in Ireland, Scotland, or Northern England, especially in the York-

shire *burr*, and in the equally strenuous treatment of the *r* on the tongue of Americans in certain Western and Northern sections of the United States, who, in common with the Scandinavian and North German races which have contributed largely to the population of those States, articulate all consonants with a grinding movement of the organs exceedingly harsh and disagreeable to an ear attuned to the finer shades of speech.

To secure delicacy of articulation, without loss of precision, the motions must be made with extreme rapidity. The slightest hesitation in articulating a consonant is fatal, especially in English, as the many nasal consonant combinations peculiar to that language tend, if prolonged, to produce a nasal twang or drawl. This rapidity of motion, of course, demands great flexibility of the organs of speech, uniform development of which is extremely rare, and sadly lacking among English-speaking people on both sides of the Atlantic. From this, the consonant suffers even more than the vowel, the labored and heavy movements of the organs of

speech producing a roughness of articulation which renders our language crude and disagreeable to the ear of the Latin races. In fact, our harsh consonant combinations are the result of those labored and heavy motions, especially of the effort to articulate without properly opening the mouth. For example, contrast the beautiful Italian word *ostacolo* with its consonant-clogged English equivalent, *obstacle*. The Italians open the vowel-chamber freely and generously four times, with a rhythmic march of the organs from closed to open, and a rhythmic flow of the tone from vowel to vowel, producing four suave, musical, open syllables — *o-sta-co-lo*. The English, on the contrary, open the mouth partially and grudgingly *once* for the initial vowel, and then accomplish the rest of the articulation by grinding the tongue against the hard palate, with a series of hissing, clicking, sputtering sounds, in the midst of which may be detected, by the ear accustomed to the vagaries of our language, the remains of an "obscure" *a* and a "muted" *e*.

To the same degree that the Italians sur-

pass all other nations in the production of vowel harmonies, are they also past-masters of the consonant processes, and those singers especially are to be congratulated who have had their first efforts to sing the consonants directed and formed according to the Italian manner. This manner affords the only perfect balance of precision and delicacy in the mechanism of speech.

While the French have equally guarded their processes from the excessive sibilation characteristic of the English and the exaggerated aspiration of the German manner, as well as the rude treatment of the non-resonant consonants common to both, they have sadly weakened the structure of their language by allowing the bell-like resonance of *l*, for example, to degenerate into the sound of *i* or *y*, through the effeminate process of *mouillure*, which is not indeed a mere "liquifying" of the consonant (as in the case of *g* when followed by *n* in *Seigneur*, *Mignon*, etc., but an absolute obliteration of it, as in *feuille*). Similar structural weakness is found in their sacrifice of the closing *m*

and *n* to the effort to increase the sonority of the preceding vowel by forcing the upper stream of resonance, thus creating the hybrid sounds known as "nasal" vowels; and again, as a secondary result of this constantly recurring depression of the *velum*, corrupting the integrity of the *r* with a palatal vibration, producing a veiled, throaty trill which is the despair of all artists who strive for purity of diction in singing.

The consonant motions are sometimes made on the stream of resonance and sometimes accompanied by no sound except the hiss of the breath, or the "click" made by the contact of two organs of speech. As both these forms of the consonant are *heard*, however, it leads to endless confusion in the study of the character of certain consonants which vary in different languages, to classify them as *sounded* and *unsounded* or "surd" and "sonant." Nor is the resonance always of the same character. For example, *b* and *m* are both resonant consonants, and both are made by the same motion of the lips; but in the case of *b* the obscure sound made

by the vocal cords is "re-sounded" only in the vowel-chamber, and there checked by the closure of the lips; while for *m*, the veil of the palate being depressed, part of the vibrations of the voice pass over it into the face mask, making a full, musical, humming sound and adding a slightly nasal quality to the consonant, which can be prolonged indefinitely through the nostrils by the breath pressure.

First of all, then, the student must analyze and group the consonants into two classes, resonant and non-resonant, and learn to distinguish clearly the exact character of the resonances of the former. This is of the greatest importance, to singers especially, as the carrying-power of the tone may be greatly reinforced by the resonance of these sub-vocal consonants, while any effort to "sing through" a non-resonant consonant can only result in a disagreeable click or hiss, if it be a closing consonant; and, in the case of an initial consonant, a bad "attack" may shatter the resonance of the following vowel, if not of the tone itself.

THE CONSONANT

One of the most important phases of the consonant process, especially for singers and students of foreign languages, is the *point of coincidence* between the vowel and a *lingual* consonant. In the case of the initial or opening consonants, the impact of the motion for the latter upon the vibrations of the breath is so slight that it may be considered a negligible quantity, but the movement of the tongue from the point of resistance of the vowel to the point of contact for a *closing* consonant is apt to produce a perceptible alteration in the sound of the vowel. Hence, certain languages possess a number of distinguishable vowel resonances which cannot be pronounced distinctly alone, as concrete vowel sounds. Such resonances abound chiefly in English, on account of the characteristic inflexibility of the Anglo-Saxon tongue.

Again, in certain closed syllables containing a single vowel, such as *not*, the period of constancy of the vowel vibrations is so brief that it is extremely difficult to ascertain by the ear alone the exact resonance of the vowel. A striking example of this is found

in the efforts of lexicographers to indicate the exact sound of the vowel *o* in the English word *wholly*, which has, in fact, the same primary resonance as the mixed *o* in the original word *whole*, modified by the impact of a *single* closing consonant into a *pure* closed *o* (see 33 and 36, Vowel Table III, page 156), this departure from the English rule of giving the open or "short" sound of the vowel before a closing consonant being due to our adoption, in this instance, of the Italian manner of pronouncing both *l's* (*whol-ly*), in order to distinguish the word from *holly* (which we pronounce *holl-y*) on the one hand, and *ho-ly* on the other.

In case of a closing *r*, a whole series of English vowel resonances depends upon the proper adjustment of this *point of coincidence.* If the movement of the tongue is made with sufficient deftness—the *juste milieu* of precision and delicacy—the elusive resonances of those beautiful shade vowels will take care of themselves. (See pages 219–222.) If, however, the consonant process be labored or slovenly the effect will be utterly disastrous

to the vowel. This is true of any vowel resonance followed by *r* in the body of a word, whether it be a shade vowel or an independent concrete sound, as in the word *America*, which, on the strenuous but inflexible tongue of certain Americans, is apt to be transformed into something which can only be partially indicated as "Amurrica."

The same effect is produced in the case of English words ending in *l*, such as *bridal*, *final*, *travel*, *civil*, etc., in which, if the tongue is not kept delicately pointed at the tip and the motion made well forward, the resonance of the vowel, whether *a*, *e*, or *i*, will degenerate into the unrefined sound of the *Natural vowel* (see page 158), or be entirely obliterated into fin'l, trav'l, civ'l. In order to regulate the point of coincidence correctly, the student has only to bear in mind that the movement of the tongue for any closing lingual consonant must be made, as nearly as possible, exactly at the point of resistance for the preceding vowel; that is, at the front of the vowel-chamber with *Front* vowels; at the middle, with *Middle* vowels; and at the

back with *Back* vowels. This is perhaps most readily illustrated, for those who have studied German, by the German manner of "aspirating" the *ch*, which is merely a *slightly* sibilant aspirate made with the tongue in the High Front position when preceded by a Front vowel, as in *ich;* in the High Middle position with a Middle vowel, as in *ach;* and in the High Back position with a Back vowel, as in *doch.* These aspirated sibilants—indeed, all forms of the sibilant consonants which abound in both German and English—offer, perhaps, the greatest difficulty to be overcome in the singing of these two languages. It is not, however, an insuperable difficulty, as both German and English singers have often proved; but it is a point to be most carefully and constantly guarded, and to which the student of diction must give close attention and painstaking work. When he has done that—when he has learned to make his consonant attack with delicacy as well as precision, and to release the point of contact for a final sibilant exactly on the release of the breath; when the strength, flexibility,

and tactile sensibility of the tongue are such that he can regulate, to a hair's-breadth, the close aperture through which the hiss of the non-resonant *s* is made, he may sing even "Hark! hark! the lark at heaven's gate sings," as Shakespeare wrote it, without calling the attention of his audience to the fact that there are *twenty-three* sibilants in the nine brief lines of that immortal lyric.

VII

SYLLABICATION

HAVING analyzed and classified the vowel forms and resonances, having gained control of the consonant motions by means of which these mysterious vocal forms are "articulated" or put together, the student is ready for the final process in the mechanism of speech—*syllabication.*

This is accomplished by means of the third element of spoken language, sound; syllabication being the art of grouping the vowels and consonants by the pulsations of the tone, or the *voice impulse.* The sound may be either a speech-tone or vocal note, and the syllable may consist of one or more vowels, or of vowels and consonants combined; but *each group must be enunciated on a single voice impulse.* The student must not con-

tuse this voice impulse with the *breath* impulse, by means of which phrases are regulated, and which is controlled by the action of the diaphragm. If he will intone a phrase such as "*do you hear me*" on a single note, he will find that the four syllables can be pronounced on a single breath impulse, while the tone thus produced is divided into four distinct pulsations of sound, the length of these sound waves varying with the number and length of their resonant elements (vowels and resonant consonants). This voice impulse is controlled by the action of the glottis, or "lips" of the larynx. With this part of the speech process, however, the student of diction need not concern himself, since, like all action of the larynx in speech, it is automatic, and will, if the breath be properly controlled, produce the voice impulse involuntarily and correctly. In speech, consonants alone, or even a single consonant, if resonant, may constitute a syllable, as in the word *bat-tle*, in which the *l* only is heard in the second syllable. In singing, however, *every syllable must contain at least one distinct*

vowel resonance, as even a resonant consonant cannot be completely vocalized.

The natural, and therefore the most harmonious, form of syllabication is from consonant to vowel. In an absolutely perfect language each syllable would begin with a consonant and end with a vowel, whatever sequence or combination of the two might intervene. French approaches more nearly this ideal form than any living language. Never, on the suave tongue of that race, is a syllable allowed to begin with a vowel or end with a consonant if it can possibly be avoided. In order to preserve this rhythmic march of the organs of speech from closed to open, they have evolved a system of *liaison* in speaking, by means of which, when a word ending in a consonant is followed by another beginning with a vowel, the final consonant and the opening vowel are "linked" together to form a separate syllable.

In singing, of course, the syllables are always marshalled according to this natural process of articulation in all languages. But the suave mediation of the *liaison*, although

heard occasionally on the Italian tongue, does not obtain in the other languages under consideration when spoken. Nothing could be more un-English, for example, or more slovenly to the cultured English ear, than to hear the sentence *it is an orange* enunciated *i ti za no range*, as a French person would say *c'es tu n(e)o range*. On the contrary, a *clean, distinct attack of the initial vowel* is a point of prime importance in both English and German diction, and scrupulously observed by all cultured speakers. It is, however, one of the finer distinctions sadly ignored by the average English-speaking person on both sides of the Atlantic. How rare it is to hear such expressions as *not at all*, for example, with a clean, crisp enunciation of the two initial vowels at the beginning of the voice impulse; and how familiar such locutions as "wouldjew" and "can'tchew" for *would you* and *can't you*. The writer has heard in more than one London drawing-room the sacrifice of the aspirate, even, to a similar *liaison* of the words *at home*.

On the other hand, a too vigorous impact of the voice impulse upon initial vowels should be equally guarded against, especially by singers. This is a marked characteristic of German speech, especially in singing, the initial vowel having almost an aspirate quality in consequence. In trying to acquire this German vowel attack, the foreign singer is apt to make an effort to produce the vowel in the larynx, with the inevitable result of eventual injury to the vocal cords. The office of the larynx, as we have shown before, but cannot too often remind the student, is to produce *tone*—fundamental, inarticulate tone—alone; and to expel the same, in a continuous series of "puffs" or pulsations. *Not until these puffs of vocalized breath reach the vowel-chamber are they transformed, by the addition of the resonant tones produced in that cavity, into distinct vowel sounds or resonances.*

The irregular, staccato rhythm produced in English and German speech by the lack of the *liaison* in syllabication may be greatly modified, however, by a more natural and harmonious division of the syllables com-

posing the *body* of the word, so that the closing consonant of one syllable may be articulated as the opening consonant of the syllable following whenever the latter begins with a vowel. For example, in the sentence "the leader is making strenuous endeavors to establish regular quarantine," the words should be divided *by the voice impulse* so as to read thus—*the lea-der is ma-king stre-nu-ous en-dea-vors to e-sta-blish re-gu-lar qua-ran-tine.*

This difference in the form of spoken and written language is a source of infinite confusion to public speakers and readers, and to students of foreign tongues. Written languages must, of course, be divided into words and sentences—although both, or at least their written forms, seem at times to have been perversely invented to confound the speaker; but when once the meaning of the text has been seized, both must be disregarded entirely and the text read, as it is spoken, *by syllables and phrases* only.

The student's first work being the perfection of the technique of his speech through

the study of its mechanism, he must note carefully the method of syllabication peculiar to each of the four languages under consideration here. This is especially important for correct articulation of *the double consonant*, which is in reality a misnomer as far as spoken language is concerned. The lengthened, or, better still, the *divided* consonant would be a more accurate definition of its character, since it is never two *complete* consonants, even when both are heard, as in Italian and German, as two sounds. A complete consonant requires, as we have already seen, two motions—a conjunction and a separation of two of the organs of speech. For example, in the word *after* there is both the conjunction and the separation of the lower lip and upper teeth for *f*, followed by a conjunction and separation of the tongue and hard palate for *t;* but in the word *affect* the conjunction is made on the first *f* and the separation on the second, the mechanism of a single consonant being thus made to do duty for both.

When the double consonant occurs in the

body of a word in English or French, it is articulated as a single consonant, according to the method of syllabication peculiar to the language to which the word belongs. For example, in the English word *alley* both *l's* are articulated as a single closing consonant of the first syllable *al(l)-ey;* in the French word *aller*, as the opening consonant of the second syllable, *a-(l)ler;* in the German word *alle* and the Italian word *alla*, however, the conjunction of the tongue and palate is made at the close of the first syllable and the separation on the opening of the second, thus *dividing the mechanism of a single complete consonant so as to produce two sounds.* Were both consonants completed, the words would be *al-e-le* and *al-e-la*, as two consonants of the same class cannot be completely articulated in succession without the intervention of the resonance of the vowel-chamber, producing the sound of the Natural vowel. This is a fault not uncommon among singers and speakers striving for distinct enunciation without a clear understanding of the mechanism of speech.

In singing, however, the Italian and German manner of pronouncing the double consonant can be used only with the *resonant* consonants; the non-resonant double consonants, such as *tt*, *pp*, *ff*, etc., must be *sung* in every language in the French manner—as a single consonant opening the following vowel. The English double consonant, whether resonant or non-resonant, is also sung in the French manner, but where the same consonant ends one word and begins the next, as in the phrase, "still and *d*ark," the two *d's* are combined as one complete consonant in the Italian manner, the closure being made on the final *d* in *and*, the opening on the initial *d* in *dark;* the result being merely to prolong the resonance of the first consonant through the time required for both without repeating the motion of the tongue for separation. If both are completed, the phrase is marred by the interpolation of the natural vowel *still and(er)dark;* if only one is completed the result is the illiterate and slovenly form *still an' dark.*

Two *different* consonants are also articu-

lated in this manner when they belong to the same class; that is, two labials or two linguals and sibilants in combination with either, such as *have been, have seen, and let, and so;* thus avoiding, on one hand, the intervention of the sound of the natural vowel, as in *and(er)let*, or, on the other, the equally incorrect *elision: an' let.*

In German a peculiar variation of this method of articulation is applied to certain final consonants, as in the words *Hand* and *hinab*, in which the closure is made with and the separation without resonance, thus adding to the final *d* its corresponding non-resonant *t*, and to *b* its corresponding non-resonant *p*, giving the peculiarly German pronunciation *Handt* and *hinabp*, which other nations are apt to pronounce with the second and less important non-resonant consonant only, as *Hant* and *hinap*.

In case of the conjunction of *r* with another consonant in the same syllable, as in the words *dreams, tresses*, etc., special care must be exercised to make the point of coincidence exact, so that the sound of the Nat-

ural vowel may not intervene between the two consonants, as is apt to happen with the heavily moving English tongue, producing the effect of two syllables, as *d(er)reams*, *t(er)resses*, etc.

Another important point in syllabication which students of foreign languages, especially singers, should carefully observe is the manner of combining the different vowel resonances on the same voice impulse, peculiar to each language. In this, Italian alone reaches the ideal standard for perfect resonance. There are no diphthongs, in the accepted sense of that word, in Italian. Although we find two, three, sometimes even as many as four, vowels grouped in a single syllable, as in the words *guarda*, *buio*, *aiuola*, etc., each vowel is given its own resonance, even where the vowel *quantity* varies, as in the words *miei*, *tuoi*, etc., in which, although the second vowel is longer, the sound of each is distinctly heard. This rule must be scrupulously observed in singing; even when two or three syllables are grouped on a single vocal note, each vowel must be given its individual resonance.

In the other languages under consideration, diphthongs are of frequent occurrence in which, taking that word in its accepted sense, two or more vowels are blended into a single sound in such a way that only one receives its full resonance, the other being a mere "glide," or *vanish*, heard only at the moment of articulation of the preceding or following consonant, as in the English word *voice*, the French word *voix*, and the German word *Euch*. In the English and German diphthongal or mixed vowels, the first vowel usually receives its full resonance, while in the French the full value is given to the second resonance.

In all languages, when passing from a final to an initial vowel, as in *I am*, or from one vowel to another in the body of the word, as in *Israel*, the greatest care should be taken *not to move the jaw* in changing the position of the tongue, as any movement of the lower jaw produces the consonant form of *y*, making such absurd—and not, alas! uncommon—locutions as *I yam*, and *Isra yell*, etc.

Finally, the actor, public speaker, or

reader must remember that his art, after its mechanism has been perfected, must be exercised, like that of the singer, according to the laws of acoustics. However perfect the articulation and finished the enunciation in ordinary conversation, the words will not reach a *distant* hearer unless the voice be projected with an impulse proportioned to the rate at which sound travels. For this reason he must read or speak, not by words but by syllables, and in order that these may reach the hearer with all their vowels and consonants intact, each must be uttered *with a separate voice impulse*, and with a deliberation calculated *according to the distance of the last auditor in the room and the acoustic properties of the latter.*

Again, as the distance to which an arrow flies depends upon the force with which the string of the bow is plucked, so the carrying-power of the voice depends primarily upon the muscular action of the diaphragm upon which the column of the breath carrying the voice rests, as the arrow rests upon the string. The force of this muscular action,

like that of the organs of speech, must be proportionate to the distance the voice is intended to "carry," and varied according to the character of the utterance—*effusive*, *expulsive*, or *explosive*.

For this reason, while the student is perfecting the action of the organs of speech, he should study the science of breathing *under the personal supervision of a competent instructor* (see page 55). Only when he has gained perfect control of the breath, the organs of speech, and the resonators above the larynx—of the more mechanical processes of speech, in fact—is he fully prepared for the study of the *art* of expression, either for acting, public speaking *or*—singing.

WORDS AND THE WORD[1]

"And what," the reader is no doubt asking, "of the place of *words* in the study of

[1] The remainder of this chapter, as originally prepared, has been suppressed, Mr. Ffrangcon Davies' complete and convincing treatment of the value of the *word* in singing (see *The Singing of the Future:* John Lane, London and New York) having rendered any mere multiplication of *words* on the subject superfluous.

diction?" Simply, dear student, that for the singer, and to a degree, even for the public speaker, words *as such* do not exist, save in the mind. In fact, words (or groups of words, for it usually demands several to express any complete idea or thought) have no individual form or character except to the eye, being mere written symbols of the thoughts to be interpreted in speech or song, by *syllables and phrases*.

It is this psychological fact that makes it possible for a singer to render intelligibly—even to a certain degree artistically—the songs of a language of which he knows only the phonetic structure, *provided he knows that thoroughly*, and has obtained, through a correct translation, the poetic thoughts which the songs embody; whereas, to speak the same language intelligently, or even intelligibly, demands equal knowledge of the rhythm, stress, emphasis, modes of inflection, variations of pitch and other modulations of the speech-*tones* peculiar to that language, all of which in singing are included in the melodic structure, the pitch and modu-

lation of the vocal note, the rhythm and tempo of the music.

The subject of English speech-tones in relation to the principle of resonance will be treated more fully in a later volume, *The Music of Speech*, for the use of English speakers, actors, and readers, in more advanced study of the art of expression. Nor would the writer wish to be understood as encouraging the singer to consider the mastery of the mere technique of a foreign language sufficient for the art of singing. While in the actual process of singing, the student must enunciate by syllables and phrases only, without regard to the mere pronunciation of the words *as such*, he cannot too thoroughly study or too deeply concern himself with *the word*—the psychic content or meaning of the text of his song. Nor will any student who has the spirit of an artist content himself longer than is absolutely necessary with the makeshift of translations to obtain this understanding. It goes without saying that the more thoroughly one knows a language, the more perfectly he is able to feel

and render the subtler shades of the poetic thoughts embodied in its songs. But this study is the *crown* not the foundation of his work in diction, which lies in the *phonetic* structure of language and the corresponding *organic* structure of speech, the corner-stone of which is the principle of vowel resonance.

VIII

ENGLISH AS A MEDIUM FOR SONG

THERE is a tradition among singers, already so ancient as to have become a fixed article of their artistic creed, that English is an unmusical language, unbeautiful if not impossible to sing.

It can readily be shown, however, that this fairly international prejudice is due rather to foreign influences, circumstance, and accident, than to lack of poetic and lyric resources in our literature, or to intrinsic faults and characteristic defects of the language as a medium for song. In the first place, the great composers having sprung chiefly from the more musical Romanic and Germanic races, the texts of their composition have naturally been chosen from the literature of those nations. By the same token, the majority of great singers, being also of foreign birth and training, choose for

their *répertoires* operas and songs written in their mother-tongue or in the other continental languages familiar to them. That the limited number of good English songs so rarely figure on the programmes of foreign artists does not, indeed, so much argue unmusical flaws in our language as the singer's practical omission in the requisite free mastery of English diction. Except in rare cases, like that of Adelina Patti, who was *to the manner born*, even those foreign singers who speak the language well do so by ear alone, and having little or no knowledge of the phonetic structure of English speech, are unable to adapt the same to the demands of tone-production.

Again, until recent years, few English artists have been able to sing acceptably those foreign languages wedded to music, so to speak; and even they have been obliged to depend on translations in order to bring the work of foreign composers within the grasp of the average English and American audience. To judge a language by its translations from other tongues is indeed a sorry

test of the music of its versification merely; how much more, then, of its intrinsic merits as a vehicle for original song! It has been aptly said that the best translation is but the reverse side of a tapestry, and it were surely an act of supererogation to blame the obliging *rhymesters* who endeavor to meet the present enormous demands for English versions of foreign musical texts, since our poets—scorning the task?—fail to supply our need. Yet it is by just such mongrel productions that artists, foreigners especially, are apt to pass judgment upon our language as a medium for song.

When we are given translations of translations the case cries out for international arbitration in behalf of the poet who furnished the original text.[1]

Indeed, the crude horrors of such versions

[1] Witness, for example, the following English versions of the text of two of Grieg's exquisite *Lieder* that come to us from Scandinavia *via* Germany:

HIDDEN LOVE

"He crept all alone by the wall;
She merrily danced at the ball.
Her glances so sweet
Drew crowds to her feet;

of foreign songs as flood the musical market at present, and tax even the patient and hungry ear of the music-loving English and

His heart was benumbed there to view it,
But not a soul ever knew it.

"He came to the house to take leave,
She fled to the garden to grieve.
She sobbed and she cried,
And she wished she had died;
She loved him, and could not subdue it,
But not a soul ever knew it.

"Years fled, but relieved not his pain,
Then home he returned, once again.
Her lot was more blest,
For she had found rest;
Her heart had been faithful all thro' it,
But not a soul ever knew it."

—From the Norwegian of B. Bjornson through the German of W. Hensen. Edition Peters.

MY GOAL

"Sure of road, yet from it bending;
Jogging on to the journey's ending;
Aye, the path we must hold and cherish,
On the road lest we rest and perish.

"Just a year on the mountain cragged,
Rocks and reefs with their jaws all jagged!
Shore and sea with waves that wallow,
Roaring, rearing, like caverns hollow.
So we wander on ways of danger,
But, tho' bold, o'er the bounds no ranger!

"Let us, love, then together wander,
Fare in fondness, the world is fonder!
All that's Northern we'll truly treasure,
Hear the sound of our tongue with pleasure.
With us, darling, oh wilt thou wander?
Fondly fare we, the world is fonder!"

—From the Norwegian of A. O. Vinger through the German of E. Lobedanz. Edition Peters.

American public, might well provoke one to denounce all translation, did we not happily possess, already, certain inalienable borrowed treasures which challenge gloriously the original text in form as well as content; such, for example, as the King James version of the Bible, and the Coverdale Psalter. Would the most jealous scholar exchange for their Hebrew source texts, those "wells of English undefiled," which have furnished the inspiration of English oratorio, even kindling the divine flame for the supreme utterance of Händel's Germanic muse?

What though, in a single instance, such as the *Dies Iræ*, a hundred and fifty or more translators have failed to render fully into English the majestic, fateful rhythm, the solemn, unearthly sonority of the original Latin idiom, when one alone, John Mason Neale, has proved how readily the precious material of both Greek and Latin verse may be transmuted into the simple English metres that lend themselves with such singular fitness to the noblest forms of church music. Is there anything secondary, ten-

tative, or tangent in *Jerusalem the Golden*?—so smoothly done withal that it conveys an impression of absolute organic unison of sound and sense, as, for example, in such lines as:

> "The Prince is ever with them,
> The daylight is serene,
> The pastures of the blessed
> Are decked in glorious sheen."

Again, in the Rubaiyat of Omar Khayyam, our language surely possesses the supreme model, the very triumph of the translator's art. Call his work "mere paraphrase" who will, Fitzgerald has so adequately turned Omar's text to the gratification of English ears, and the English understanding, wit, and intuition, that no English soul at least cares whether the original was written in Persian, Chaldee, or Stone-Age Finnish. The dry bones of philology may rattle, and case-hardened antiquarians jealously contend for the "integrity" of the Persian text, yet the very dust of the poet might stir could he hear his own thoughts start and throb and spontaneously move in such lines as:

"Wake! For the sun, who scattered into flight
The stars before him from the field of night,
Drives night along with them from Heaven and
strikes
The Sultan's turret with a shaft of light."

If such spontaneous and consummate work can be achieved from remote oriental sources, how much more hopeful the task should be, *if competently essayed*, of rendering the neighboring languages of Continental Europe into adequate English? Or, if our native poets will not deign to echo the notes of contemporary lutes, let them mark the proper enchantment of Lady Charlotte Guest's delightfully quaint, archaic version of the Welsh *Mabinogion* as a hint of the treasures of English song to be found in the obscure native sources of Celtic legend and Gaelic lore.

Among American poets, Bayard Taylor has given us a translation of Goethe's *Faust* that for fidelity to the original text, combined with poetic grace and spontaneity, is equalled only by Schlegel's versions of Shakespeare's dramas. And what a text for a great Eng-

lish music drama! How many noble and illuminating passages, such as the Prologue in Heaven, how many gracious and tender touches, missing from the French opera, such as Margaret's prayer to the Virgin:

"Incline, O maiden,
Thou sorrow-laden,
Thy gracious countenance upon my pain."

And her pathetic love song:

"My peace is gone,
My heart is sore,
I shall find it never—
Ah, nevermore!"

which preserves so perfectly the rhythm of the original German as to bear even the test of Schubert's setting of that exquisite lyric.

Again, in Longfellow's skilful handling of the poetic treasures of the Romance languages, as well as his masterful free use of the metric forms of the Finnish Kalavala for the embodiment of the legendary lore of the North American Indian, we have further

proof of the composite adaptability of English as a unique medium for the transmission of the poetic thought of all nations into the universal language of song.

Yet these are but the dim auroral display, the faint foreshadowing of the possible glories of our bounden English minstrelsy.

"The English language," says Jacob Grimm, "by and through which the most eminent poet of modern times—of course I can refer only to Shakespeare—was begotten and nourished, has a just claim to be called a language of the world, and it appears to be destined, like the English race, to a higher and broader sway over all the earth." And again, Emerson compares our speech to "a sea that receives tributaries from every nation under the sun."

To mention only one or two of the rare pearls cast up on this side of that inexhaustible sea of English poetry, what literature has ever offered the composer a more musical measure than the rhythmic, pulsing, rushing, *singing* lines of Bayard Taylor's Bedouin *Love-Song:*

"From the Desert I come to thee,
On a stallion shod with fire;
And the winds are left behind,
In the speed of my desire.
Under thy window I stand,
And the midnight hears my cry;
I love thee, I love but thee,
With a love that shall not die
Till the sun grows cold,
And the stars are old,
And the leaves of the Judgment Book unfold!"

Or more ethereal vowel harmonies than are to be found in Poe's exquisite lyric *Israfel:*

"In Heaven a spirit doth dwell
Whose heartstrings are a lute.
None sing so wildly well
As the angel Israfel.
And the giddy stars, so legends tell,
Ceasing their hymns, attend the spell
Of his voice, all mute."

He is a fastidious song-writer indeed, and has a lyre of few strings, who cannot fit his strains to some lyric flight of Shakespeare, Ben Jonson, Herrick, Browning, Tennyson, Poe, Howells, or Aldrich, not to mention a score of less-known writers of truly musical English verse.

That this poetic wealth has bred so few native composers [1] is no proof that the language is not adaptable to musical forms. Poetry, having its intrinsic music, is not, like song, dependent for completeness on the sister art. The Anglo-Saxon genius has rarely voiced itself in music, and now that McDowell has vanished from the hither shore of the vast sea of speech which unites England and America, our one great living composer, Elgar, stands as solitary among our rising song-writers as some lone mountain peak above surrounding foot-hills. But, as Mr. Matthews has recently pointed out, English is rapidly becoming the second

[1] Since this chapter was prepared, Mr. David Bispham has shown that our language is already far richer in original operas than the writer, for one, had dreamed. The reader will find much interesting and inspiring information in the article on "The American Idea in Music and Other Ideas" in the prospectus recently issued by the American Society of Music, of which Mr. Bispham is the president, setting forth practical plans for a theatre in New York to be devoted to the performance of opera in English, a plan which should have the earnest and active support of every American at home and abroad interested in the advancement of music in our country.

speech of all cultivated peoples, and every Continental deep-sea diver for music-texts will find himself somewhat at home in these alien waters which, to quote again from the great German philologist, "issued from a marvellous union of the two noblest tongues of Europe, the Germanic and the Romanic." The genuine composer's art is not bounded by his native tongue, else Händel had hardly so glorified his name in England; and it is, perhaps, to more musical nations that we must still look, for the time being, for such worthy espousals of our poetic treasures. Certainly no other living language can offer to the composers of the future so rich, so varied, and so flexible a medium for the construction of opera and oratorio texts, as ours. Through its Germanic element, English has gained a breadth and fulness of form, a virility and power of expression lacking in the speech of the modern Latin races; while, together with the latter, it has inherited from a common Romanic source delicacies and subtleties of tone and resonance which the heavier

and more unwieldy structure of the German language is incapable of producing.

Again, while the Italian language possesses only seven, or at most eight, vowel resonances, ours contains more than twice that number; and, although French and German have almost as many independent vowel sounds (those that can be enunciated alone without the aid of a consonant), the English vowel-gamut contains, in addition to these, half as many more distinguishable "shade" vowels, produced by the conjunction of the various pure and mixed vowel resonances, with the sound of the (closing) consonant *r*. (See pages 219–222.) It is to these beautiful, elusive shade vowels that Grimm refers in the following paragraph (*Ueber den Ursprung der Sprache*, p. 50), from which we have already quoted, and the significance of which the reader or student cannot too deeply ponder: "No one of all the modern languages has gained a greater force and strength than the English through the derangement and relinquishment of its ancient laws of sound. The profusion of its unteachable

(nevertheless learnable) *middle tones* has conferred upon it an intrinsic power of expression such as no other human tongue ever possessed."

Since science has shown that a vowel is not a mere sound, but a harmony of various tones and "overtones" differing in pitch, and as these vowel harmonies constitute the basis and body of all speech (the consonants being mere processes of articulating or weaving the same together), it must be conceded, upon the ground of its wealth of vowel resonances alone, that English stands without a peer among modern languages as a medium for the expression of poetic thought, which is the very heart of song.

It cannot be denied that in the development of this richness, flexibility, and variety, this marvellous union of strength and vigor with delicacy and subtlety of expression, English has lost somewhat in purity of form, and hence must rank second to the more meagre and monotonous but more melodious Italian, in facile adaptation to certain forms of the vocal art. But to condemn a lan-

guage at large because of some conspicuous flaw in some particular phase of it were as unreasonable as to exalt another unreservedly by virtue of some partial grace of it, which is precisely the sort of judgment that composers and singers seem to have passed on these two languages, as though all Italian sounded like the verse of Dante and Tasso, or Palestrina fugues, and all English like the words of a London "coster" song. In fact, when the English vowel-gamut is correctly analyzed, it is found to be more nearly akin to the Italian than that of either French or German. In the fusion of the Germanic and Romanic elements from which it sprang, our mother-tongue has eliminated the harsh gutturals and aspirates that mar the German speech, and excluded from its vowel-gamut the unbeautiful nasal resonances which the French have evolved from our common Latin derivatives, as well as the obscure covered or "modified" sounds adapted by both nations. Indeed, the peculiarly English *mixed* and *shade* vowels, by means of which the Anglo-Saxon genius has so greatly

enriched our language, are found, when carefully analyzed, to be composed of resonances as pure as those of the Italian vowels. That they are more difficult to sing than the latter cannot be denied; but *when correctly vocalized*, according to the relative and varying values of these mixed and shade resonances, English is neither more difficult to sing nor more "unmusical" than either French or German.

That it has been so considered and condemned by artists is due chiefly—to our shame be it said—to the fact that English singers, as a rule, sing their own language so badly. So rare, indeed, are the exceptions to this rule that such artists as Sims Reeves, Antoinette Stirling, Ffrangcon Davies, Bispham, or Susan Metcalfe are popularly supposed to have accomplished a sort of vocal miracle in singing artistically their own language!

This deplorable state of things is, to a certain extent, excusable—or at least to be accounted for by the fact that our singers are usually taught by foreign masters, and

having accepted the verdict of the latter in regard to the unmusical character of English, they devote all their energies to the study of Italian, French, and German diction, rarely making any serious effort to master the peculiar difficulties and *beauties* of their own language. To speak a language correctly, even with elegance and distinction, while it is, of course, the best basis for the study of lyric diction—if we may be permitted so to indicate the *sung* word—is not sufficient to enable one to sing it artistically, or even intelligibly, any more than the possession of a naturally good voice will enable one to sing acceptably without proper vocal training.

Though we possessed the greatest composers, as we already possess the rarest singing voices of modern times, we shall never produce a native school of opera or song until we develop a proper pride in and cultivate a finer sense for the intrinsic beauties of our language; not merely as a vehicle for communication by conversation—that, our sweet-voiced cousins across the water have long ago perfectly demonstrated to the

world, without, however, convincing either composers or singers of its value as a medium for song. This, perhaps, is peculiarly the mission of the American singer. As the low-toned, beautifully modulated, English speaking-voice possesses the faults growing out of those qualities, so by the divine law of compensation that regulates the universe the *vox Americana*, which has made for itself such a world-wide and unenviable reputation in speech, is equally rich in *the qualities of its defects*, as the French say—power, depth, compass, and, above all, a brilliant and bell-like resonance in singing. This they have already demonstrated on the stage of nearly every opera in Europe, where, besides, they are hampered by the necessity of singing in a foreign language. What, then, may they not hope to do in English opera, provided they master the peculiar difficulties of their native language as thoroughly as foreign singers do?

English being a more complex language than either Italian, French, or German, this work demands special training, but those

singers who will devote even a single year to the mastery of the technique of speech *according to the laws of resonance* will be surprised and delighted to find with what ease and beauty English may be sung. Such singing the English-speaking public now demands, and opera managers, composers, singers, vocal instructors, and, above all, teachers of *diction*, must fall into line with this demand. For it is plain that if we are to have a native school of English song and opera, it must begin, not where Italian opera began, but where German opera leaves off. The Anglo-Saxon temperament is not, like the Italian, satisfied with a mere "concord of sweet sounds"; nor have its higher artistic cravings been fully appeased by the noble harmonies and dissonances of the scarcely more articulate Wagnerian music drama. It still longs for true but intelligible *singing* of poetic *thoughts*. And this ideal is not unattainable, now that science has revealed the principles and laws of resonance that underlie and unite the processes of speech and song. Any singer who will thoroughly

master the technique of speech according to these laws will find that the full value of the spoken word may be given in singing without the sacrifice of any real beauty of tone—the true *bel canto*.

To the observant student of the trend of contemporary music it is evident that the word is destined to play a rôle of ever increasing importance in the song and opera of the future. Indeed, much of the musical work of Debussy, Wolf, and other song-writers of these post-Wagnerian days, is utterly unintelligible without a full understanding of the text. Actors who can sing and singers who possess dramatic ability have sought to meet this demand by trying to bridge the gulf that separates the speaking-voice from the singing-voice with "cantilations" and other artistic hybrids which are neither speech nor song. But interesting and entertaining as these vocal acrobatics have been made by such true artists as Mr. Ffrangcon Davies, Doctor Wüllner, and Herr von Possart, they have only proved that the singer still *sings* and speaker *speaks*, how-

ever charmingly they may "cantilate" their poems or declaim their songs. The significant interpretations of Dr. Ludwig Wüllner especially place the coming issue squarely before the singers of to-day. Shall the opera and song of the future be true but intelligible *singing* of poetic thought or merely the declaiming of song?

HOW TO USE THE BOOK

HAVING read through Part I consecutively, the student should review carefully Chapters III and IV, with the aid of Figs. I, II, III, and IV. When he has gained a fairly clear idea of the structure of the organs of speech and the resonators, let him begin the exercises under "Studies in Enunciation," according to the directions given on pages 258–261. If, as is usually the case, one or more of the muscles be found too weak to perform the exercises correctly, he should pass on to the next, returning to the previous one at the next practice, in regular order. Not more than two new exercises should be undertaken at a single lesson; but all previously given should be repeated several times daily, until each can be done with perfect ease.

Where the muscles are inflexible from lack of proper use or from *wrong* use in singing, it may take much time and patience to gain proper co-ordinate control of the organs of speech; and that no time may be lost, let the student proceed at once with the exercises for *resonance*, according to the directions given on page 271, through Exercise X, skipping IV to VIII, inclusive. The object of these exercises being to gain control of the two streams of the divided breath, the student need not concern himself with the action of the organs of speech, save to note carefully that in humming with *m* the lips and teeth should be kept closed *naturally*, without any undue tension of the muscles, and the tongue down in the *normal* position; while for humming *n* both lips and teeth must be kept apart and the tip of the tongue lifted to the natural point of contact against the hard palate for that consonant. Each of the resonance exercises must be conquered before passing to the next; and as the ability to do them correctly depends chiefly upon the correct breath pressure, they furnish an in-

fallible test of the student's ability to control the breath properly for singing, public speaking, or even reading aloud. If they fail to produce the maximum amount of resonance, it is proof positive that the breath is not emitted properly or with sufficient economy, in which case he should turn his attention to the study of breath-control while gaining control of the organs of speech. Meanwhile, in order that no time may be thus lost, the student may gain a clearer mental grasp of the work by re-reading carefully the chapter on "The Vowel" (V, Part I); then proceed with the study of Chapter I, Part II, taking one position with its variants at each reading; but he should not attempt to maintain the tongue positions in singing until the *intrinsic* muscles of that organ have been strengthened by the proper exercises.

When this has been accomplished, let him devote his attention to the proper adjustment of the resonator for the *five cardinal vowels* until he has gained perfect control of the *focal point of support*, and of the *point of resistance* for each, together with the amount

of breath pressure necessary to secure the maximum of resonance in intoning the same according to Exercises 4 to 7, pages 272–274.

Proceed with the other resonances in the same manner, beginning, if the student be a singer, with the Italian vowels (the writer does this with *every* pupil), then the resonances of his native language; if English or American, or a foreign student of English, the *mixed* vowels should be omitted until the pure resonances are perfectly acquired, the chapter on the classification of the English vowel resonances (II, Part II) being carefully followed. In studying French or German, the "nasal"—or, more correctly, the *double* resonances—and the *covered* or "modified" vowels should not be attempted until the pure resonances peculiar to each language are acquired.

In order that the work may be more complete and the progress even as well as rapid, the study of the *consonants* should be begun as soon as the five cardinal vowels are perfected; the student first re-reading carefully

Chapter VI, Part I, then practising each consonant motion with each of these resonances in the order given in the "Studies in Articulation" (III, Part II). Only when the three English modes of articulating *r* have been conquered can the various *r shade vowels* be properly acquired; and only after all the consonant motions can be made with both precision and delicacy can the English *mixed* vowels be given, in singing especially, with their correct and varying values.

As each consonant is perfected the student should proceed with the sentences for practice of the same given at the close of the "Studies in Enunciation," page 279. Foreigners should also read carefully and constantly refer to Chapters III and V (Part II), pages 250 and 293, on the *vagaries* of English pronunciation.

Finally, let the student re-read carefully Chapter VII, Part I, on "Syllabication," and then apply what should now be a perfected technique to the study of the *art* of speaking or singing. In the case of singers, the adjustment of the word to the tone may be most

easily and perfectly obtained by repeating each phrase of the song or aria to be learned four times, in the following manner:

(*a*) Repeat the phrase, syllable by syllable, *without any voice* (either tone or whisper), exaggerating the *natural* movements of the organs of speech, until the motion for each consonant and position for each vowel are distinctly felt and recognized as correct.

(*b*) Intone the vowels alone, with a sustained flow of the two streams of resonance, at a continuous pitch—that of the singer's *natural* pose of the voice (see page 33), keeping the lower jaw relaxed, and carefully maintaining the point of support *under* the tip of the tongue, the sides of which, only, should be allowed to move in changing from the *point of resistance* for one vowel to that of the next.

(*c*) Intone the full phrase, syllable by syllable, making precise but delicate movements for each consonant, without perceptibly interrupting the flow of the vowel resonance, and while maintaining a continuous pitch, following as nearly as possible

the rhythm and tempo of the music. Return to the humming on *m* between each phrase to keep proper adjustment of the resonators. Above all, the student must be sure that he is *intoning* properly, with the two streams of resonance, and not merely *chanting* on a fundamental or cord tone, which is not only useless for the adjustment of the word to the tone, but when practised habitually injurious to the vocal cords.

(*d*) *Sing* each phrase through on the vowels alone, without articulating the consonants, until each tone has its full complement of *vowel* resonance. Not until this can be done, indeed, is one properly prepared to *begin* the study of songs!

PART II

"If to do were as easy as to know what were good to do, chapels had been churches, and poor men's cottages princes' palaces."—*The Merchant of Venice.* Act I, Sc. II.

I

THE VOWEL FORMS AND RESONANCES

HAVING studied carefully the *principle* of the mechanical process of vowel formation, the student is now ready to proceed with the analysis and production of such of the resonances composing the vowel-gamut of the languages considered in this work as his own studies may demand.

As the volume and brilliancy of these vowel resonances depend upon the size and shape of the vowel-chamber, the mouth must be kept well open, the organs of speech properly adjusted, and especially the correct position of the tongue maintained. To the finely attuned ear the vowel resonances may be as distinctly *off the key* as the vocal note from one or more of these conditions being violated, and whenever this happens the

beauty of the tone as well as the vowel is marred, since, as we have already seen, the resonance of the tone is necessarily either reinforced or diminished by the resonance of the vowel with which it is sung.

The study of the vowel resonances should begin with that of

THE NATURAL VOWEL (21)

This is the name given in English to the natural resonance of the vowel-chamber without any adjustment of the organs of speech. Although the sound is not included in the vowel-gamut of any other civilized people, every speaker and singer should be able to recognize and produce it as a point of departure for the production of all the other resonances.

Standing with his back to the light, holding a small mirror directly in front of the face with the right hand, while the left rests gently upon the diaphragm to regulate the column of breath, let the student inhale deeply and naturally through the nostrils, keeping the

chest well up, but the shoulders loose and free, the head erect, with the chin at right angle to the spine; then, dropping the jaw downward and backward by completely relaxing the muscles, *without moving the tongue from its normal position* (flat on the floor of the mouth with the edges resting lightly against the lower teeth), let him exhale the breath slowly and steadily, in a pure whisper, without any tension of the vocal cords. In the sound thus produced he will recognize the resonance of the *Natural vowel* given in English to the article *a* before a word beginning with a consonant, as *a* man, *a* book, etc., and to various other English vowels, a complete classification of which will be found in the following chapter.

When the whispered resonance has been distinctly heard, let the student gradually intone the sound, keeping the tongue in its normal position (Mid Middle) by the focal pressure already described. (See pages 72, 73.)

Being produced thus without any shaping or preparation of the vowel-chamber, beyond the dropping of the lower jaw to open the

resonator, the sound is unrefined and unbeautiful, the resonance very obscure. It is in fact *the elemental vowel*, being the first sound made by infants in their efforts to articulate. It is said to abound in savage dialects, and its retention as a definite vowel in English is due, like the evolution of the equally unrefined mixed vowel, to the inflexibility and sluggish action of the organs of speech characteristic of the Anglo-Saxon race. This resonance must never be substituted, as is apt to be the case with English-speaking people, for the final *e* in French, Italian, or German.

If, while retaining this Mid Middle position, the tongue be widened by pressing the sides outward against the lower teeth, the resonance produced will be that of the English *u* as in *u*s, *u*tter, etc., the *Mid Middle Wide* vowel (22), which differs from the *Natural* only in the breadth and sonority added to the resonance by the increased width of the vowel chamber.

If, on the contrary, the surface of the tongue be narrowed at the Mid Middle position

by slightly contracting the side muscles toward the centre, the resonance produced will be that given in German to the final *e* in ein*e* (23), a much more refined and delicate sound than the *Natural vowel*, which it so closely resembles, however, that English-speaking people are apt to confuse the two resonances, to the mystification and despair of the native German vocal teacher if he does not know the difference in the two tongue positions.

The Germans obtain another resonance from this position by *covering* the sound, during its emission, with a forward motion of the upper lip, thus changing the resonance to that of the "modified" vowel *ö* (24) peculiar to German, as in Götter. The only difficulty in producing this resonance correctly is due to the mistaken effort to hold the tongue in the position for *o*. Although the *o* alone has been retained in the modified digraph, formerly written *oe*, the resonance is that of the *e* (final) covered, as the student can readily demonstrate for himself, when familiar with the two tongue positions, by

delabializing ō. (See page 89, foot-note.) Indeed, he will find it a physical impossibility to produce a modified or covered resonance with the tongue in the *correct* position for *o*. Let him attempt, while intoning the vowel *o*, to change the resonance to ō, and he will find that he cannot produce any sound even remotely resembling the latter *without changing the tongue position;* while, if he begins by intoning the Mid Middle Narrow vowel *e* (23), the resonance will change to that of ō as soon as the vowel is well covered by the upper lip.

When the student has succeeded in producing and hearing these four somewhat obscure resonances obtained with the tongue at its normal elevation, he is ready to shape the vowel-chamber for the series of vocal forms obtained from the next primary vowel position. This is done by lowering the *point of resistance* at the sides of the tongue from the Mid Middle to the Low Middle position (see Diagram I), thus depressing the surface of the tongue *from the*

middle to the front only, and producing the fullest and clearest of all the resonances: the first of the five cardinal vowel sounds—

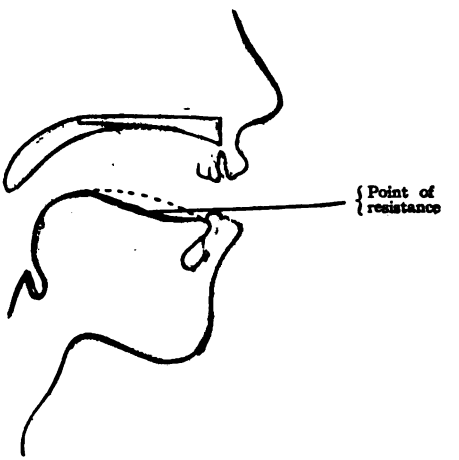


DIAGRAM I

Side view of the position of the tongue for the *Low Middle* vowel (25). The dotted line indicates the normal position of the tongue when at rest.

THE LOW MIDDLE VOWEL (25)

This sound is given to *a* in Italian, French, English, and German, as in the key-words

given in Vowel Table II—*m*adre, *a*me, *a*sk, and *A*bend.

Great care should be taken in shaping the chamber for this vowel not to depress the tongue at the back,[1] where, indeed, if perfectly relaxed (as is necessary to maintain the poise of the larynx in singing), it will appear to the eye to be raised, in contrast to the depression of the surface at the front.

[1] This pernicious habit, so prevalent among English and German singers, and so baffling to the teachers of true *bel canto* production, is due to the fact that so many English authorities classify this so-called *broad a* as the Low *Back* Wide vowel. Had these eminent scholars and phoneticians been singers as well, they would have found that this tongue position fails to stand the ultimate test for all vowel resonances, vocalization; for it is impossible to sing this vowel with the tongue low at the back; it cannot even be so spoken *correctly*—that is to say, with its full quota of resonance. It is, in fact, a physical impossibility to form any vowel on the Back positions without depressing the larynx unnaturally, except by advancing and rounding the lips, as for *o*, and the instant such a change is made in the shape of the vowel-chamber during the emission of *a*, the resonance changes to that of *a* in *awe*, proving the *latter* to be the Low Back Wide vowel; while a similar test of the position giving the fullest, clearest resonance for *a* in *ask* proves that the natural and therefore the correct position for that vowel is Low *Middle*.

Nor should the *centre* of the tongue be depressed deliberately in the mistaken effort to form a "gully" or "groove," which only results in stiffening the *superior lingual muscle* from the tip to the back, and thus depressing the larynx. If the tension of the *inferior lingual muscle* at the *focal point* be sufficient, the surface of the tongue will fall naturally into the proper depression.

One of the inexplicable vagaries of so-called *accent* is the tendency of English and German people, who possess this beautiful normal resonance of *a* in common with the Italian and French, to substitute for it, in speaking the latter languages, the broader and coarser resonance of the *Low Middle Wide* vowel (26), peculiar to English and German, produced by pressing the side muscles of the tongue outward against the lower teeth. This resonance is heard on the tongue of cultured English speakers *only before the closing consonant r*, as in b*a*r, h*a*rd, etc., and in German only before the aspirate, or *r*, as in w*a*hr, and in *aa*, as in *Aa*l.

The French, on the contrary, narrow the tongue in this position, thus producing the more delicate and elusive resonance of the *Low Middle Narrow* vowel (27) peculiar to their language, and, like the wider English and German variant, heard only before the consonant *r*, as in *a*rmée, p*a*rler, *a*rgent, ch*a*rme, etc. This resonance (neither so *clair* as that of *a* in *a*mi, nor so "sombre" as *â*) being the result of the French manner of articulating the *r* with a vibratory movement of the soft palate, is not classified by their authorities as an independent vowel sound. These wide and narrow variants of the *Low Middle* vowel are indeed mere shade vowels, but English and German students who wish to acquire a pure French accent must learn and practise the different tongue positions in order to avoid confusing the resonances, as they are so apt to do when depending entirely upon the ear for guidance; hence the writer includes both resonances in the regular vowel-gamut.

Foreign students of French must also learn to produce the Low Middle vowel with

the veil of the palate slightly depressed, thus giving the double resonance of the *Low Middle Nasal* vowel (28), also peculiar to the French language. This resonance is given to both *a* and *e* when followed by a *single* closing *m* or *n*, as in the words l*am*pe, tr*em*ble, ch*an*t, *enfant*; the *m* or *n* being silent (except when the following word begins with a vowel, in which case it is articulated as the opening consonant of that word, *never* as a closing consonant of the syllable in which it occurs), the vowel alone having the "nasal" or double resonance. The student will find little difficulty in producing the resonance correctly when it occurs as the final sound in a syllable; but when the *m* or *n* is followed by another *pronounced* consonant, great care must be taken not to move the tongue during the emission of the double resonance, or the result will be a nasal consonant also, as in the English words l*amp*, tr*emb*le, ch*ant*, etc. Great flexibility of the veil of the palate is necessary to produce these nasal vowels correctly. When that has been acquired by the proper breath-

ing exercise, the attention of the student must be directed to the correct manner of emitting the tone, in order to secure a perfect adjustment of these double resonances. This can only be done, as we have already seen, by increasing the pressure of the breath on the upper stream of the resonance, instead of dividing these vibrations equally with the divided stream of the breath, as in the *normal* manner of tone-emission. If the vowel vibrations are also crowded into the resonators above the palate, the result will be the pinched nasal quality characterized by the French in their verb *nazarder;* if, on the contrary, all the vibrations, both tone and vowel, pass beneath the lowered palate, forcing the same backward against the pharynx, the result will be the equally disagreeable and far more unrefined nasal "twang" known among English-speaking people as "talking through the nose" (which is, however, exactly the opposite process, as the student may perfectly demonstrate for himself by closing the nostrils firmly between the thumb and index finger while speaking).

When the variants of the *Low Middle* vowel have been successfully produced and heard, the student is ready to attempt the more difficult feat of lifting the tongue to the second primary position—that of

THE HIGH MIDDLE VOWEL (15)

the point of resistance for which is easily found by pressing the sides of the tongue

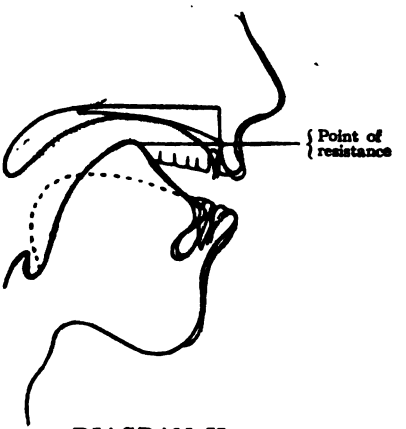


DIAGRAM II

Side view of the position of the tongue for the High Middle vowel (15). The dotted line indicates the normal position of the tongue when at rest.

against the upper teeth at a point midway between the front and back of the vowel-chamber, while holding the tip firmly down behind the lower front teeth with the *focal pressure*, thus dividing the vowel-chamber into two compartments, so to speak, exactly equal in size, and giving equal depth and brilliancy to the vowel (see Diagram II). This resonance, the second of the five cardinal vowel sounds, is given to *e* in Italian, French, English, and German in closed syllables, as in st*e*lla, sc*e*ne, s*e*nd, *e*ndlich. It is usually called the "short" *e* in English, but, more correctly, in Italian and French the "open" *e*.

In the variants of this tongue position we have a group of vocal forms peculiar to the French language. The *High Middle Wide* vowel (16) *ê*, as in r*ê*ve, m*ê*me, etc., differs from the *High Middle* vowel only in the greater breadth and sonority of resonance, caused by widening the tongue and thus enlarging the front compartment of the vowel-chamber. In making this movement with the tongue, great care must be taken not to

lower the *point of resistance*, as both English and German speakers are apt to do, thus confusing the resonance with that of the French *a*, as in *lave*.

In contracting the surface of the tongue for the *High Middle Narrow* vowel (17), however, the *point of resistance* must be slightly raised, so that the side muscles are pressed against the *alveoles*, or "gums," just *above* the upper teeth, in order to produce the resonance peculiar to the French unaccented *e*, as in *le*, *te*nir, etc. The indolent English tongue is apt to sag on this vowel to the normal position, thus substituting the resonance of the *Natural vowel*—as in *her*—so disagreeable to the foreign ear.

Two other resonances are obtained by the French from this tongue position: First, by covering the sound during its emission, they modify the resonance to that of the *High Middle Narrow* (covered) vowel (18) indicated by the vowel combination *eu*, as in f*eu*, d*eu*x, etc., which is, however, a pure vowel, *not a diphthongal sound*. Again, by slightly lowering the veil of the palate, they

obtain the *High Middle Narrow* (*Nasal*) vowel (19) given to the *u* when followed by a single closing *m* or *n*, as in the words *un*, h*um*ble, l*un*di, etc. The difficulty encountered by foreigners in trying to produce this vowel is due to the effort to hold the tongue in the position of the Italian *u* or English *oo*. For exact instruction for producing the correct nasal resonance, see *Low Middle Nasal* vowel, page 167.

THE HIGH FRONT VOWEL (1)

In order to produce this resonance the tongue is not only lifted but moved forward until the sides press against the upper front teeth as near the eye-teeth as possible, and at the same time the tip must be held firmly at the *focal point* behind the lower front teeth by a *downward*, *forward*, and *lateral* pressure of the *inferior lingual muscle* under the front part of the tongue, in order to keep the *centre* of the *superior lingual muscle* perfectly relaxed from tip to base, and thus maintain the poise of the larynx for a free

emission of the tone-waves. This position of the tongue divides the vowel-chamber into two unequal compartments, the front chamber being much smaller than the back one

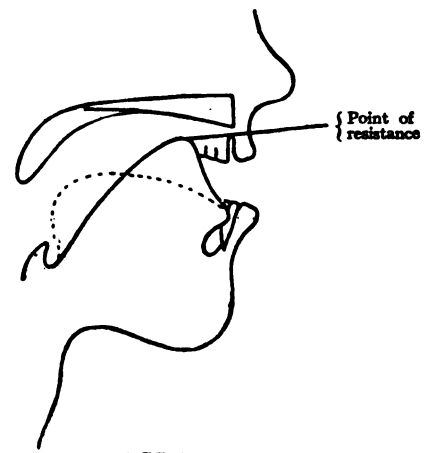


DIAGRAM III

Side view of the position of the tongue for the High Front vowel (1). The dotted line indicates the normal position of the tongue when at rest.

(see Diagram III). If the former is not correctly shaped and maintained, the vowel resonance will be lacking in brilliancy; if the latter be sacrificed by lowering the tongue

and narrowing the aperture between the lips, as many singers are apt to do in order to secure brilliancy of *tone*, the vowel resonance will be entirely without depth or sonority and of a colorless, sharp, penetrating timbre. The resonance produced by this vocal form is the third cardinal vowel sound, being given to the so-called long *e* and *ee* in English in the open syllable, as in h*e*ro, s*ee*, etc.; to the *i* in German, when followed by silent *e* or *h*, as in *die*, *ihm*, etc., and to *i* in Italian and French in closed syllables, as in *i*nni, *i*ci, etc. The writer inclines to the opinion that it is only by *narrowing* the tongue in this High Front position that we obtain the more delicate and brilliant resonance peculiar to the Italian and French *i* in the open syllable, as in s*i*, m*i;* hence, she leaves the tongue position an open question, giving the student choice of the *High Front* vowel (1) and the *High Front Narrow* vowel (2).

By covering this vowel during its emission the resonance is changed to that of the *High Front* (Covered) vowel (3) peculiar to the

French language, as in t*u*, m*u*rm*u*re, etc. (See page 89.)

The wide variant of this tongue position gives another resonance—that of the so-called "short" *i*—peculiar to English and German, as in *i*s, l*i*ttle, H*i*mmel, *i*st, etc., the High Front Wide vowel (4).

By covering this vowel during its emission, the Germans modify the resonance to that of *ü*, as in *ü*ber, tr*ü*ben, etc., the *High Front Wide* (Covered) vowel (5). The only test of the correct tongue position for this, as for all covered or modified vowels, is to delabialize the resonance. (See page 89.)

When the tongue is sufficiently strong to maintain the High Front position, the student will find it comparatively easy to drop to the position for

THE MID FRONT VOWEL (7),

which is extremely difficult to reach by moving the tongue upward from the lower positions, as the *point of resistance* is in mid-

air, so to speak, just between the upper and lower teeth, so that the side muscles are not braced by either, as in case of the High and Low vowels. This resonance is given to the closed *e* in Italian, as in sera, dolere, etc. In groping for the elusive *point of resistance* for the vocal form peculiar to this Italian vowel, the English tongue is apt to move during the emission of the sound, giving the secondary resonance peculiar to the English *Mixed a* (20), so disagreeable to the Italian ear, accustomed only to the purest vowel resonances. For this reason it is better for English singers in *practising* the Italian vowels to use only the *High Middle e* (15), as the corresponding English vowel *e*, as in bed, is a pure resonance.

Perhaps the most difficult feat for the sluggish English tongue is the narrow variant of this vocal form peculiar to French, the *Mid Front Narrow* vowel (8), called the "closed" *é*, as in fée, bébé, pénétré, etc. This is the most delicate, subtle, and elusive resonance in the entire vowel-gamut. It can, however, be acquired, even by the heavy

English tongue, *without any trace of foreign accent* by patient practice in contracting the side muscles first in the High Front position, then, while intoning the Italian or French *i*, gently lowering the *point of resistance* to the Mid Front Narrow position, *without widening the tongue.*

Somewhat less difficult for the English student are the two wide variants of this vocal form peculiar to German, the *Mid Front Wide* vowel (9) *e*, as in L*e*ben, and its covered resonance (10) given to the "modified" *ä* in Mädchen.

We come now to a group of vocal forms producing variations of the resonance given to *a*, in the four languages under consideration, in the *closed* syllable, and especially where the closing consonant is doubled.

THE LOW FRONT VOWEL (11)

is the resonance given in German to *a*, as in *A*ffe, *a*llein, etc.; and also heard by the observing foreign student of phonetics on the tongue of cultured Italian speakers, both in

Rome and Florence, in certain *closed* syllables, as *a*nno, m*a*ttina, etc. As this shading of the vowel is due to the peculiarly Italian manner of articulating the closing consonant, the Italians take no note of the same, their authorities giving—as far as the writer has been able to ascertain—only one sound of *a*, the more sombre resonance used in the open syllable, as in m*a*dre, d*a*re, etc. Singers, of course, use only the latter always, but even they, as well as speakers who wish to acquire the language without a foreign "accent," must practise the *a* with the two tongue positions, in order to avoid the tendency to substitute the variant of this vowel peculiar to his or her own language.

The resonance peculiar to English is produced by broadening the tongue to the position of *Low Front Wide* vowel (14), as in *a*nnual, fl*a*tter, etc., while the French narrow the tongue on this position, giving the greater delicacy of resonance peculiar to the French *a clair*, the *Low Front Narrow* vowel (12), as in *a*nnée, *a*ller, etc.

By slightly lowering the veil of the palate

with the tongue in this position (see the instructions given for the Low Middle Nasal vowel), the French secure the double resonance peculiar to the *Low Front Narrow Nasal* vowel (13), which is given to *i* and to *y* before a single closing *m* or *n*, as in the words t*im*bre, th*ym*, v*in*, s*yn*taxe, etc. The student should note carefully that the vowels *a* and *e*, when preceding this nasal vowel, are always silent, as in the words f*aim*, tr*ain*, pl*ein*, etc.

In taking up the study of the *Back vowels* we must emphasize the fact, already noted, that the word "Back" is used *relatively* only, the positions of the tongue being merely *just back of the Middle positions*. If made at the back of the vowel-chamber the strain upon the larynx is excessive and injurious, and the resonance of the vowel is obscured by placing the sound under the soft palate instead of under the vault of the hard palate. In the High Back position especially, the size of the back chamber of that double vocal form is so diminished that it becomes difficult to

produce a clear, full resonance, even in speaking, and in singing impossible. The student has already demonstrated the fact that it is much less difficult to begin with the high positions and drop the tongue gradually to the lower than to work in the opposite direction, and he will now find a similar advantage in working from front to back. Hence, to secure the correct position for

THE HIGH BACK VOWEL (30)

he should begin by lifting the tongue to the *High Front* position, then while first whispering and afterward intoning the vowel *e*, as in *be*, move the *point of resistance* slowly backward, at the same time advancing and rounding the lips. If the tip of the tongue be held firmly in place by the *focal pressure*, while the side muscles are braced against the upper teeth in moving backward, as soon as these muscles reach the point just back of the High Middle position the resonance will change to that of a clear, brilliant Italian *u* (see Diagram IV).

This resonance, the fifth cardinal vowel sound, is common to the four languages under consideration. being given to the

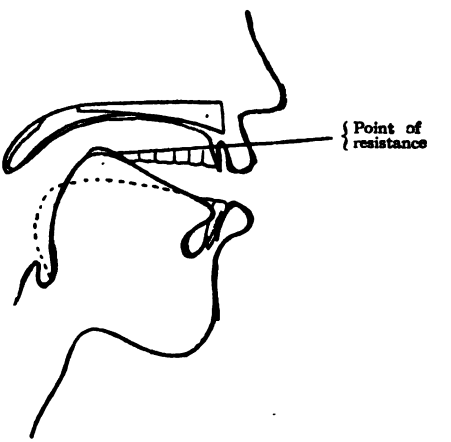


DIAGRAM IV

Side view of position of the tongue for the High Back vowel (30). The dotted line indicates the normal position of the tongue when at rest.

vowel *u* in Italian and German, to *ou* in French, and to *oo* in English.

There are no *narrow* variants of the *Back* vocal forms, as it is impossible to contract the side muscles of the tongue in that posi-

tion without throwing undue strain upon the larynx; but by widening the tongue in the *High Back* position we obtain a resonance peculiar to English and German, the *High Back, Wide* vowel (31). This resonance is given to *u* in German, as in the word H*u*nd, and to *oo* in English, as in g*oo*d. From this *High Back* position the tongue drops easily to that of

THE MID BACK VOWEL (33)

This is another resonance common to the four languages, being the fourth cardinal vowel *o*, as in cr*o*ce, t*ô*t, g*o*, S*o*hn, and, like the other back vowels, must be well rounded by the lips.

The wide variant of this vowel is peculiar to the French language, and usually termed the "open" *o*, as in the words s*o*le, l*o*ge, the *Mid Back Wide* vowel (35). The French also obtain a third resonance from this tongue position by slightly depressing the veil of the palate during the emission of the vowel, thus giving the double resonance of the *Mid Back Nasal* vowel (34), heard in

such words as m*o*n, r*o*nde, etc., where the vowel is followed by a single closing *m* or *n*. See further instructions given under the *Low Middle Nasal* vowel (28).

THE LOW BACK VOWEL (37)

gives an open resonance of *o* common to Italian, English, and German, and used chiefly in closed syllables, especially when the closing consonant is doubled, as in n*o*tte, c*o*llar, W*o*nne; while its wide variant, the *Low Back Wide* vowel (38), is a vocal form peculiar to English. This resonance is given to the vowel *a* when followed by certain closing consonants, as in *a*we, *a*ll, etc. (see page 201). Great care must be taken not to give a secondary resonance to this vowel by moving the tongue, as is often done in provincial sections of the New England States. As in the case of all the Back vowels, the lips only are moved to round the vowel and bring forward the sound.

The English *Mixed Vowels*, produced by

moving the tongue from one position to another during the emission of the sound, thus changing the shape of the vowel-chamber and giving two successive resonances to the vowel, form a class apart, and demand special study. A full classification of these and of the *r* shade vowels, also peculiar to English, will be found in the following chapter.

The student should not be discouraged if at first he is unable to produce clearly and distinctly all these vowel resonances or even those belonging to his own language. Let him consider that in the mental effort necessary to transfer the control of his speech from the sense of hearing to the sense of touch, his psychological condition is similar to that of a person long blind who has had his sight suddenly restored and finds it difficult to accept the evidence of the new sense, until confirmed by the testimony of the more familiar one upon which he has been accustomed to rely. For this reason the writer encourages her pupils to use a hand-mirror in studying the vocal forms, thus calling in

a third witness to aid the limping sense of touch in its first feeble efforts to control the organs of speech. But we must not forget that *the eye is even more unreliable than the ear* in recognizing and regulating the vocal forms, as we have already noted in the case of the tongue positions for *e* (15) in "bed" and *a* (14) in "bad," which appear to be the same when seen from the front (see page 75, foot-note). The difference in many other vocal forms is equally as subtle, and depends entirely upon the tension of the muscles at the *point of resistance*, hence can only be detected by the sense of touch.

With the aid of the numbers and of the key-word given under each vocal form in the Vowel Tables, the student whose tongue is under proper control should now be able to acquire with ease and rapidity the forty vowel sounds constituting the gamut of resonances of the four languages considered in this work, or as many of them as his individual studies demand.

II

CLASSIFICATION OF THE ENGLISH VOWEL RESONANCES

THE illogical and cumbersome spelling of our language makes it impossible to formulate a complete and unvarying classification of the English vowel sounds. But the foreigner who studies the structure of our speech from the standpoint of its vowel resonances according to the English modes of syllabication, as indicated in the preceding chapters, will find that there is a certain method in that "derangement and relinquishment of its ancient laws of sound" through which, according to Jacob Grimm, English has acquired a force and strength as well as an intrinsic power of expression such as no other modern language possesses.

Not only the foreign student, but every

English-speaking person whose diction is faulty, and *all* singers and public speakers, should master thoroughly this somewhat obscure and complicated but rhythmic variation of the English vowel resonances. Turning to the Vowel Tables (*see folder*), and applying to the English key-words the system of phonetic analysis given in the preceding chapter, the student will note, first, that the English vowels are of two kinds—*pure* and *mixed*. The pure vowels are those having only one resonance, the mixed vowels being composed of two pure vowel resonances. For example, the *a* in *can* is a pure vowel, having only one resonance, while the *a* in *cane* is composed of two different vowel sounds, the primary resonance being that of the *e* in *bed;* the secondary, that of *i* in *it*. This impure or diphthongal vowel quality, so marked in English speech, is readily accounted for by the inflexibility of the organs of speech characteristic of the Anglo-Saxon race, especially the sluggish action of the tongue, which, in preparing for the motion of a closing consonant, alters the shape of the vowel-chamber during

the emission of certain vowel sounds, thus producing a secondary resonance. As the development of the language tends toward greater unity and purity of resonance, this secondary vowel sound is less and less accentuated in cultured speech, being indeed a mere vanish of the voice, heard only at the moment of the articulation of the following consonant; except in the case of the *Mixed u*, in which the accentuated resonance comes last. On the tongue of the most refined speakers the secondary resonance is not heard at all in the *final* vowels or in the open syllable. In the case of *e* and *o* especially there is no excuse for this movement of the tongue during the emission of the vowel which produces this secondary resonance, except the preparation for the articulation of a closing consonant, hence in the final vowel or the open syllable it has absolutely no *raison d'être*.[1] There is no greater test

[1] It is for the purpose of keeping before the mind of the student this subtle but important discrimination between the pure and mixed resonances of these vowels that the writer has made a separate classification of the same in the Vowel Tables, giving the *e* in *be* and

of the purity of an actor's diction than the ability to render the first phrase in the famous soliloquy of Hamlet, "*To be or not to be,*" with sufficient resonance, without making a diphthongal sound of the vowel *e* in the word *be.*

The habit of giving two resonances to all the vowels is characteristic of the careless or illiterate English-speaking person, while refined speech is marked by the most scrupulous preservation of these subtle distinctions between the pure and the mixed vowel resonances. Except in the case of the *Mixed u*, the two resonances should be distinguishable only in monosyllables or final syllables *ending with a silent e*—such as l*a*te, conc*e*de, t*i*me, h*o*me, etc. Even in the compounds of such words, where the mixed vowel is followed by a *pronounced* syllable, the primary resonance alone should be *distinctly* heard. In order to gain perfect control of these varying values of the mixed vowels, foreigners should note carefully the distinctions made

the *e* in *eve*, for example, as two different vowel sounds, although the primary resonance is the same.

by cultured English speakers between the vowels in such groups of words as the following:

*L*ate, l*a*ter, l*a*test; conc*e*de, conc*e*ded, conc*e*ding; t*i*me, t*i*mely, t*i*med; h*o*me, h*o*mely, h*o*ming; etc.

Nothing is more fatal to the purity of tone in singing than the slightest exaggeration of the secondary resonance of the mixed vowels, and foreign students, in acquiring the language, should exercise the greatest care not to imitate the manner in which these vowels are pronounced by the "cockney" element of London, and in certain provincial sections of the United States.

On account of this habitual movement of the English tongue for the mixed vowels, it is exceedingly difficult for English-speaking adults to learn to speak or sing Italian, French, or Spanish with purity of accent. For this reason the writer urges upon all her English and American pupils—and demands of those who intend to sing—a thorough preliminary training of the tongue on the full Italian vowel-gamut. This is

absolutely necessary to secure pure vowel quality in singing, and since the Italian vowels form the basis of the English vowel-gamut, there is no better nor quicker means of developing the full quota of vowel resonance in speaking even our own language.

English has borrowed so freely in its growth and development from various other languages differing widely in their etymological structure, that it is impossible to formulate exact rules for the pronunciation of the English vowels. But by studying the language according to its phonetic structure, and thus eliminating the confusing vagaries of the *natural vowel*, the *mixed*, the *obscure*, and the *shade* vowels, we find at least a good working basis for a classification of the remaining resonances in the original Latin rule—that in closed syllables (those ending with a consonant) the vowel should be open, and in open syllables (those ending with a vowel) the vowel should be closed. This rule still obtains to a sufficient extent in the modern Romance languages, especially in Italian, to furnish an excellent key to the

general scheme of the vowel harmonies of those pre-eminently musical languages. For example, the writer finds in it the first satisfactory explanation of the vagaries of the French nasal vowels, so-called, and the only consistent rule for a classification of the same (see page 167). While less generally applicable to English, the student will find it an aid not to be despised in studying the more complicated English vowel harmonies, resulting from the union of the Germanic and Romanic elements in our speech.

These closed and open resonances are usually called in English the "long" and "short" sounds of a vowel, which is not only confusing and inadequate as a definition, but inaccurate as well. The test of vocalization alone is sufficient to prove that there is no such thing as a "long" or "short" vowel *per se*, as a long vowel may be sung on a short note, and *vice versa*. The English mixed vowel with its two resonances is, of course, "longer" when *spoken* than the pure vowels; but the word "long" does not describe its *character* to the foreign ear, ac-

customed only to pure vowel resonances; nor is it adequate to secure proper vocalization of this mixed resonance in singing. The words "open" and "closed," however, indicate exactly the difference in the shape of the vowel-chamber, and consequently in the character of the resonance during the emission of both the so-called "short" vowels *e* and *o* in such words as *bed* and *got*, and the equally pure resonances of the same vowels when called "long" in *be* and *go*. On the other hand, the terms "long" and "short" do express perfectly another and entirely different characteristic of the English vowel harmonies—their *tempo*, or duration of sound, which at present is indicated vaguely by the word "quantity." If we employ these terms to indicate two *different* sounds of the same vowel as in *name* and *arm*, how shall we convey to the foreign student any idea of the varying values of the *same* sound in different words or in different poetic metres, as, for example, in the following expressions: "the star-spangled banner," "the starry heavens," and "the mariner's guiding star"?

And how can we even indicate the wide gamut of resonances given to the single vowel *a* in the words l*a*te, l*a*tter, l*a*st, l*a*rk, l*a*w, *a*lone, sep*a*r*a*te, and c*a*re?

Briefly, then, for the student of diction, the English vowel-gamut must be divided first into *pure* and *mixed* resonances; the pure vowels subdivided into *open*, *closed*, and *obscure* resonances; each of which must be differentiated, in turn, from the resonances of the *natural* vowel, and from its own *shade* vowels, which are sometimes pure and sometimes mixed. Thus we shall see how it is that certain letters of the English alphabet, such as *i*, have only two sounds while others have three or more; *a* for example, having seven, at least. In order to avoid confusion in referring to these divisions and subdivisions, as well as to facilitate the work of the student in gaining control of his vowel forms *by the sense of touch*, we shall indicate the different sounds of each vowel by giving the position of the tongue which regulates these resonances, according to the precedent established by Doctor Bell in *Visible Speech*,

but *by a different system*, based on the *point of resistance*, already explained in a previous chapter. (See page 74.)

The composite character of the language renders it inevitable that there should be many exceptions to any rules for pronunciation of the English vowels, and a special chapter is devoted to the classification of the same. In the writer's experience with pupils of various foreign nations, as well as with English singers and speakers, she has found the following classification the most satisfactory working basis for correct and refined pronunciation of the English language.

The study of English should always begin with the study of the *Natural Vowel* according to the directions given on page 158 of the preceding chapter. When the student has succeeded in producing this sound correctly by *whispering* and *intoning* as there described, he will soon be able to pass from that into an ordinary speech-tone with a distinct vowel resonance. The *point of resistance*—which in this vowel merely serves to hold the tongue in its normal position, and

hence can only be slightly felt even in prolonging the resonance—is at the *sides* of the tongue, exactly in the middle, both as regards the front and back, and the top and bottom of the vowel-chamber, hence called:

THE MID MIDDLE, OR "NATURAL," VOWEL (21)[1]

We have no symbol, or letter, to indicate this resonance, which is given to various vowels and vowel combinations, as follows:

(*a*) to the indefinite article or adjective *a* before words beginning with a consonant—as, *a* man, *a* tree, *a* book;

to the obscure *a* in the suffix *able*—as, account*a*ble, reason*a*ble, etc.;

to the prefix *a* in such words as *a*bove, *a*round, etc.;

(*b*) to the obscure *e* in the definite article or adjective *the* before words beginning with a consonant, as—th*e* man, th*e* book, th*e* tree, etc.;

to muted syllables ending in a silent *e*—as, a*ble*, cen*tre*, peo*ple*, etc.

[1] The numbers are those given in the Vowel Tables, indicating the position of the tongue.

(*c*) to the *final er* and *ir*, as in riv*er*, f*ir*, etc.

(*d*) to the obscure *o* and *u* when followed by a closing *n*—s*on*, M*on*day, w*on*der, S*un*day, pl*un*der, etc.

(*e*) to the vowel combinations *io*, *ou*, and *iou* in the endings *sion*, *tion*, *ous*, and *ious*—as, les*ion*, na*tion*, jeal*ous*, grac*ious*, etc.

This *Natural vowel*, having such an obscure sound, is very difficult to sing effectively. Singers should refine the resonance by shifting the point of resistance *slightly* toward that of the vowel for which it is substituted. For example, when given to *a*, as in *alone*, *a rose*, etc., the *point of resistance* should veer sufficiently from the Mid Middle *toward* the Low Front position to maintain something of the character of *a* without giving the exact resonance of the Low Front vowel; in the *e* of the muted final syllable in *people*, toward High Middle position; in the combinations of *io*, *ou*, etc., toward the Mid Back position.

Besides this "natural" vowel resonance thus given to each of the English vowels under certain conditions, each of these vowels has an "obscure" individual resonance pecul-

iar to itself, and a "shade" vowel produced by conjunction with the consonant *r*, neither of which should be confused with the resonance of the Natural vowel. These distinctions are readily acquired by the foreign student; it is only the careless or illiterate *native* speaker who finds in the Natural vowel position a pitfall ever ready to betray his tongue.

THE RESONANCES OF *a*

The Low Front Wide Vowel (14).—To produce this resonance correctly the tongue must be held low and wide at the front, the *point of resistance* for maintaining the shape of the vowel-chamber during the emission of the tone being just behind the lower front teeth.

This is the resonance given to *a* in closed syllables, where the closure is made by a single or double consonant, except *ss* (final) and those mentioned in other classifications:

as	canal	abbey	married
can	salad	allot	flattering
habit	balance	annul	stammerer

In certain *unaccented* syllables this vowel has an obscure resonance, as in *separate*, which must not be confused with that of the natural vowel and can only be taught orally. In syllables ending with silent *e*, such as pal*a*ce, the resonance resembles that of the open *e* in b*e*d; if preceded by the *i*, as in the words *carriage*, *marriage*, the resonance is modified *toward* that vowel. In words of three or more syllables, when followed by a final unaccented syllable ending in *y*, the resonance of the *a* becomes so obscure as to be almost imperceptible, as in the words *military*, *dictionary*, etc. Great care must be exercised, however, to give this vowel its normal resonance in final unaccented syllables ending with a *pronounced* consonant, especially *l*, as in the words *final*, *bridal*, etc., to which the resonance of the Natural vowel is often given, resulting in a most vulgar pronunciation. Indeed, the student should always keep in mind, in the study of each of the English vowels, these significant words of Mr. Richard Grant White (which we here italicize for emphasis): "*It is in the delicate*

but firm utterance of the unaccented vowels, with the correct sound, that the cultured person is most surely distinguished from the uncultured."

The Low Middle Vowel (25).—This is the resonance of the pure Italian *a*, and is one of the five cardinal vowel sounds common to Italian, French, English, and German. It is given to *a* in closed syllables when the closure is made by *two different* consonants (except *sh*, which gives the resonance of the *Low Front* vowel, as in d*a*sh, b*a*shful, f*a*shion, etc.), and those belonging to the other classifications:

ask	past	clasp	balm
task	last	hasp	calm
flask	vast	rasp	psalm
after	bath	salve	glance
waft	path	calves	command
half	wrath	halves	answer

The Low Middle Wide Vowel (26).—This resonance is given to *a* when followed by the consonant *r*, except when the latter is doubled or followed by the silent *e*, as in other classi-

fications. This is a peculiarly English sound, produced by the widening of the tongue for the English manner of articulating the *r* when final or followed by another *different* consonant. It should never be confused with the preceding *Low Middle* vowel, as this extreme broadening of the tongue always produces a slight resemblance to the resonance of *r*, which is exceedingly vulgar in words *not* containing that consonant. It is never heard in either French or Italian, except on the tongue of English-speaking people when acquiring those languages, and is always a shock to the finer ear of the Latin races. Foreigners should practise the word lists of the two vowels alternately, until the difference in the width of the tongue is distinctly felt:

bar	hard	farther
far	spark	startle
star	tarn	market

The Low Back Wide (Rounded) Vowel (38). —This resonance is given to *a* when followed by the closing consonants *w*, *ll*, *ld*, *lk*, and *lt*.

To produce this resonance correctly great care must be taken not to place the *point of resistance* too far back, but just back of the middle position. As in case of all the Back vowels, the sound must be well rounded by the lips, and great care must be taken *not to move the tongue* during the emission of the vowel, giving a secondary resonance, as is done by many dwellers in certain provincial sections of New England, where one hears "jaw-er," "saw-er," and even "draw(er)ing-room"!

awe	all	bald	talk	halt
saw	fall	scald	walk	salt
lawyer	hall	caldron	chalk	alter

The Mixed a (20).—This is another peculiarly English vowel, during the emission of which the tongue moves from the *High Middle* to the *High Front Wide* position, producing two resonances; the primary resonance being that of *e* in b*e*d, the secondary that of *i* in *i*s, the chief stress being on the former, the latter being a mere vanish of the voice heard only at the moment of

the articulation of the following consonant.

These resonances are given to *a* in tonic syllables ending with silent *e*, and before muted syllables, or those containing the sound of the Natural vowel:

ale	ached	able
fade	bathed	ladle
name	haven	staple
wafer	station	gracious
taper	evasion	veracious
safer	relation	herbaceous

In cultured speech, as we have already noted, the two resonances of this, as well as of all the mixed vowels (except *the Mixed u*) are heard *distinctly* only in closed syllables ending in silent *e;* even in compound or composite words having the same root, only the primary resonance is distinguishable. The student should practise such words as *fade, faded, fading*, until the difference in the movement of the tongue can be distinctly felt, so that the relative values of the resonances may be given with precision.

THE RESONANCES OF *e*

Besides the resonance of the Natural vowel which is given to *e* in combination with the final consonant *r*, in muted syllables, etc. (see page 196), this vowel has three distinct sounds and one obscure resonance.

The High Middle Vowel (15).—This resonance, usually called the "short" *e*, or, more properly, as in Italian, the open *e*, is given to the tonic *e* in all closed syllables, except those ending in *r* or silent *e*, and others included under the *Mixed e:*

bed	travel	ecstasy	errand
end	merit	angelic	merry
tell	beckon	American	settle

The High Front Vowel (1).—This resonance is given to *e* and *ee* in open syllables:

he	see	cedar	creation
we	tree	venal	beatitude
she	flee	recent	reassure

Great care should be exercised to preserve the purity of this vowel in contradistinction to the diphthongal character of

The Mixed e (6), in which the tongue moves during the emission of the vowel from the High Front to the High Front Wide position, giving two resonances. These resonances are heard only in closed syllables ending in silent *e;* they are also given to *ee* when followed by any closing consonant except *r:*

*e*ve	been
eff*e*te	fleet
conc*e*de	creed

In certain unaccented syllables and in unaccented prefixes *e* takes an obscure sound approaching the resonance of the *High Front Wide vowel i*, as in *is* (4):

*e*vent	el*e*ment	b*e*lieve
*e*vasion	compr*e*hend	r*e*ceive
s*e*lect	ind*e*pendence	r*e*deem

THE RESONANCES OF *i*

There are only two sounds of *i* in English, one pure and one mixed.

The High Front Wide Vowel (4).—This is the resonance given to the tonic *i* in closed

syllables (except those ending in *r* or silent *e*); and to the unaccented *i* always:

is	trill	river	civil	charity
sit	little	pistol	cavil	quality
him	riddle	vinegar	merit	family

The Mixed i (29).—This is another peculiarly English vowel, during the emission of which the tongue moves from the *Low Middle* vowel position (25) to that of the *High Front Wide* vowel (4). This is given to the tonic *i* in open syllables, in closed syllables ending in silent *e*, and in a few exceptional words ending in two *different* consonants (see page 298):

I	idolatry	glide	Christ
item	incisive	twine	child
viper	iconoclast	smile	bind

When used as a vowel, *y* takes the resonance of the *Mixed i* (29) in all open syllables having a tonic or distributive accent, and in closed syllables ending in mute *e:*

by	deify	hyphen	rhyme
try	glorify	hyacinth	thyme
fly	beautify	tyrant	style

In all other cases it takes the resonance of the *High Front Wide* vowel (4):

city	lyric	mystery
hardy	rhythm	syllable
thrifty	crystal	hysterical

THE RESONANCES OF *o*

The resonances of *o* correspond to those of *e*, being of three kinds: open, closed, and mixed, and following the same rules.

The Low Back (Rounded) Vowel (37).—This resonance, usually called the "short" *o*, is given to that vowel in all *closed* syllables except those belonging to other classifications. As in the case of its wider variant, the *a* in *a*we, great care must be exercised in shaping the vowel-chamber not to place the sound too far back on the tongue, but, as in all the other Back vowels, just behind the middle position, and to keep the sound well forward by rounding the lips:

on	topic	occur	*o*pposite
off	forage	holly	inoculate
not	knowledge	cottage	positive

The Mid Back (Rounded) Vowel (33).—This resonance, usually called the "long" *o*, is given to that vowel in all open syllables:

no	solo	noble	position
go	veto	holy	ferocious
so	folio	notation	vocabulary

Care must be taken not to confuse this *pure* vowel sound with that of

The Mixed o (36), during the emission of which the tongue moves from the *Mid Back* position to the *High Back Wide* position, giving two resonances. It occurs only in closed syllables ending with silent *e*, and in certain exceptional words ending with two *different* consonants (see page 301):

rose	console	gold
home	anecdote	most
alone	lonely	blown

THE RESONANCES OF *u*

The Mid Middle Wide Vowel (22).—This resonance, usually called the "short" *u*, is in reality a wider variant of the *Natural vowel*, which it closely resembles, having, however,

more breadth and sonority on account of the greater width of the vowel-chamber. It is given to *u* in closed syllables (except those ending in *r* or silent *e*):

us	utter	brush	escutcheon
but	sully	dulcet	muscular
mud	butter	Russia	lumbago

The Mixed u (32).—This *u* is the most marked and the most beautiful of the English mixed vowels, and differs from all the others in having its chief accent, or stress, on the secondary instead of the primary resonance. The tongue moves during the emission of the vowel from the *High Front Wide* to the *High Back* position, both resonances being distinctly heard except when followed by *r* (see page 219), the greater value being given to the second resonance.[1]

These resonances are given to the tonic *u* in open syllables, in closed syllables ending

[1] When preceded by *r*, as in rue, rude, ruin, etc., it is *admissible* to suppress the primary resonance, but in rhetorical speech and in singing the full mixed resonance should always be given.

in silent *e* or their compounds, and when followed by *e* or *i:*

use	jubilee	assume	cue	suit
lute	acumen	allude	sue	juice
tune	exuberant	effusion	blue	nuisance

THE RESONANCES OF *oo*

The *oo* has two sounds in English, both being pure vowels.

The High Back vowel (30) has the resonance of the Italian *u:*

coo	ooze	cool	gloom
too	choose	soon	trooper
woo	moose	moon	doomsday

The High Back Wide Rounded Vowel (31). —This resonance is merely a slight variant of the preceding vowel, having greater breadth and sonority on account of the greater width given to the vowel-chamber by the widening of the tongue. Although this sound is given to *oo* only in closed syllables, the High Back vowel is applied indiscriminately to both open and closed syllables, so that no rule can be given for the guidance of foreigners, who

can only learn to distinguish them by practise:

good	brook	woolen
book	stood	crooked
look	shook	hooked

THE RESONANCES OF *ou*

The diphthong *ou* is pronounced in nine different ways in English. As in the majority of the words in which it occurs, however, it takes two resonances, it is classified in this work as a *mixed vowel* with numerous exceptions. (See pages 303–305.)

In the enunciation of this mixed vowel the tongue moves during the emission of the sound from the Low Middle to the High Back Wide position, giving two resonances, the primary resonance being that of *a* in *a*sk, and the secondary that of *oo* in g*oo*d—*never*, be it specially noted, the *oo* in c*oo*, which it often becomes on the tongue of careless speakers, who are also apt to give the first resonance the sound of the *Low Front a* instead of the *Low Middle a*. Great care should be taken to preserve the exact charac-

ter of this primary resonance which receives the greater stress of the voice, the secondary resonance being a mere vanishing sound on which the following consonant is articulated:

out	ounce	mouth	bound
cloud	house	pouch	shroud
rout	proud	stout	mountain

oi

The diphthong *oi* should also be classed with the mixed English vowels, the primary resonance being that of *a* in *awe* (38), rather than *o* (37) as written, the secondary that of the so-called short *i* (4). *Oy* has the same resonances:

oil	voice	joy	royal
coin	rejoice	cloy	voyage
poise	cloister	decoy	employer

VOWEL COMBINATIONS

au

This vowel combination is *not* a diphthong but a pure vowel sound, though not always

the same resonance. In *laugh* and *draught* and when followed by *nd*, *nt*, or *nch*, it takes the resonance of *a* as in *a*sk, the Low Middle vowel (25); in the word *gauge* that of the *Mixed a* (20); and in all other cases, that of *a* as in *awe*, the Low Back Wide vowel (38):

(25)		(38)	
daunt	jaunty	aught	raucous
haunt	launch	cause	cauldron
dauntless	laundry	fault	maudlin

ai AND *ay*

The diphthongs *ai* and *ay* are usually given the resonance of the *Mixed a* (20), except when followed by the closing consonant *r* (see page 200):

aid	straiten	gray
aim	braided	spray
ailment	maiden	affray

ea

Except where it occurs as a shade vowel of *r*, the vowel combination *ea* is given a single pure resonance. This resonance is some-

times that of the *High Front* vowel (1), sometimes of the *High Middle* vowel (15), and again of the *Mixed a* (20); while in the word *hearth* the *e* is silent, and only the resonance of the syllabic *a* (*r*) (26) is heard. As these resonances are given arbitrarily, with no regard even to the general rule for the open and closed syllables, it is impossible to classify the combinations. We can only give a few leading examples of each, as the number of words in which the different sounds are used respectively is enormous, and foreigners can only acquire them by rote and use (see lists of words spelled alike and pronounced differently, and r shade vowels of *r*, page 219):

(1)	(15)	(20)
eat	bread	great
read	breakfast	break
league	instead	steak

ei AND *ey*

The same arbitrary usage obtains in the case of the vowel combination *ei;* which is sometimes given the resonance of the Mixed *a* (20); sometimes that of the Mixed *e* (6);

and again that of the Mixed *i* (29). In tonic syllables *ey* usually takes the resonance of the Mixed *a* (20), and in unaccented syllables that of the *High Front* vowel (1):

(20)	(6)	(29)
veil	receive	height
deign	conceive	sleight
neighbor	inveigle	seismic

(20)	(1)
they	money
obey	monkey
convey	journey

In *weir* and *weird*, *surfeit* and *counterfeit*, the *e* is silent, and only the resonance of *i*, High Front Wide (4), is heard. In *leisure* the vowel combination is usually given the resonance of the High Front vowel, but by some authorities that of the High Middle vowel; in *either* and *neither* some authorities give to *ei* the resonance of the mixed *i* (29); others, that of the High Front vowel (1).

eo

In tonic syllables *eo* usually takes the sound of the High Middle vowel (15), as in *leopard*,

jeopardy, etc.; but in *yeo*man it has the resonance of the Mid Back vowel (33); while in p*eo*ple the resonance changes to that of the High Front vowel (1); and again, in unaccented syllables it takes the resonance of the Natural vowel, as in escutch*eon*, right*eous*, etc.

ie

The vagaries of the combination *ie* are even more confusing than those of *ei*. For example, in the word *chief* it has the resonance of the High Front vowel (1), but in the compounds of that word, *mischief*, *kerchief*, and *handkerchief*, it takes the broader sound of the High Front Wide vowel (4); in the word *friend* and its compounds the resonance changes to that of the High Middle vowel (15); when followed by the consonant *w*, as in *view*, *review*, etc., it has the sound of the *Mixed u* (32). Again, when forming the body of a monosyllabic word it takes the resonance of the *Mixed i* (29); but when forming the plural of words of more than one syllable, it has the resonance of the High

Front Wide vowel (4). In the majority of other cases it is given the resonances of the *High Front* vowel (1):

(29)		(4)		(9)
hie	ties	lilies	decencies	brief
lie	flies	glories	amenities	believe
pie	skies	follies	charities	reprieve

(See also lists of words pronounced alike and spelled differently, page 310.)

oa AND *oe*

The normal sound of *oa* is that of the *Mixed o* (36), while *oe* takes the pure resonance of the *Mid Back* vowel (33):

oak	hoe
boat	toe
foam	floe
gloaming	sloe

But in the word *broad*, the resonance changes to that of the Low Back Wide vowel (38); in *shoe*, the vowel combination takes the sound of the High Back vowel (30); and in *does* that of the Natural vowel (21).

ew

The normal resonance of *e* when followed by *w* is that of the Mixed *u* (32), as in *dew*, *flew*, *jewel*, etc.; but in the words *sew* and *shew* its resonance changes to that of the Mid Back vowel (33).

ow

The arbitrary usage noted in *ei* and *ie* obtains with *ow;* it is sometimes given the two resonances of the *Mixed* vowel *ou* (39), and sometimes those of the *Mixed o* (36), as in the following examples:

(36)	(39)
bow (arc)	bow (salutation)
flow	flower
pillow	endow

But in *knowledge* and its compounds the resonance is that of the Low Back vowel (37), while in *bellows* and *gallows* the consonant modification is entirely lost, and the vowel given a coarse and corrupted form of the Mid Middle vowel (21).

r SHADE VOWELS

The English vowel-gamut is further enriched by a series of resonances produced by the conjunction of the various pure and mixed vowels with the sound of the consonant *r* in *closed* syllables, as in the following words:

PURE SHADE VOWELS

earn	herd	girl	word	curl
pearl	service	girdle	world	turn
earth	concert	thirst	worthy	burst

MIXED SHADE VOWELS

air	mere	fire	wore	our	cure
fair	here	sire	tore	sour	assure
prayer	sere	lyre	swore	flour	endure

These shade vowels all have a slight family resemblance, so to speak, due to the peculiarly English habit of articulating the closing *r* with the *side muscles* of the tongue at the Mid Middle position, thus giving to the preceding vowel a slight suggestion of the sound of the Natural vowel.

On the tongue of the careless or illiterate speaker, these various resonances are apt to degenerate entirely into the Natural vowel, the words *girl*, *pearl*, *world*, and *curl* being pronounced with exactly the same vowel sound. There is, however, no greater mark of distinction in English speech than the subtle discrimination made by the cultured speaker in preserving the exact values of these beautiful shade vowels by carefully retaining the resonance of the original vowel *with the added breadth and sonority given by widening the tongue for the articulation of the r*, as above noted, without adding a distinct secondary resonance. For example, in the words *earn*, *pearl*, *earth*, where the *r* is followed by another closing consonant, the vowel combination is a pure resonance; but when *ea* is followed by *r* alone in a *final* syllable, as in *ear*, it takes as a secondary resonance that of the Low Middle Wide vowel (26)—the normal sound of the syllabic *ar*—but the *primary* resonance varies so capriciously that foreigners can only acquire these combinations by practise of

word lists such as the following, in which both resonances are indicated:

(4–26)	(15–26)
fear	bear
dear	swear
tear	tear (to rend)

In the case of these mixed shade vowels, care must be exercised not to exaggerate the vanishing sound of the *Natural* vowel in such words as *rare*, *here*, *tire*, *pore*, *pure*, *hour*, etc., as the result is a *third* resonance, characteristic of the most uncultured speech; also not to confuse these mixed vowel sounds with the *pure* resonances of the shade vowels in *final* syllables ending in *r*. (For example, it is one of the most common slips of the Western American tongue to pronounce the *o* in for with two resonances, as "*fo-er.*")

These shade vowels are the resonances to which Grimm refers as "the profusion of *middle tones* which has conferred upon the English language a power of expression such as no other human tongue ever possessed" (see page 139). These "middle tones" are,

as that writer adds, "unteachable, nevertheless *learnable*," by a careful analysis of the vowel resonances upon which they are based, and practise of the movements made by the tongue in the modifications of these resonances produced by the English manner of articulating the consonant *r*, when final or followed by another consonant (see pages 240–241).

III

STUDIES IN ARTICULATION

CONSONANTS being merely the processes of articulating or weaving together the vowel resonances (see Part I, Chapter VI), they can be perfected only by practising the motions during the emission of a stream of vowel resonance (see pages 269–279). Nor, as we have already seen, should any attempt be made to practise syllables beginning with a consonant until the process for each consonant has been thus perfected, the only exception to this rule being the

y (initial or opening).

This symbol represents either a vowel or a consonant, according to the office it performs in the word in which it occurs; when final or forming the body of the syllable, it is to be regarded as a vowel and given the resonance demanded for the corresponding *i;*

when it begins the syllable it performs the office of a consonant in opening the vowel-chamber, and its character as such must be accentuated by a downward movement of the lower jaw. As this motion affords excellent practise for securing the relaxation of the muscles of the jaw and the open vowel-chamber so necessary in obtaining clear and full vowel resonances, the writer has found it very helpful to give the following exercises for *y* at the very beginning of the study of the consonants:

1. Inhale deeply but naturally through the nostrils; open the mouth sufficiently to see the tongue, which should be held at Low Middle position by a firm pressure of the tip at the focal point already described; and while intoning the vowel *a* (25), drop the lower jaw downward by a vigorous movement from the normal position for speech to the singing position, *without interrupting the stream of resonance.* This will produce the syllable *ya*, which should be repeated rapidly *without moving the tongue* until the action of the lower jaw is free and easy.

2. Repeat Exercise 1, with the tongue in High Middle, High Front, Mid Back, and High Back positions, thus making syllables on each of the other four cardinal vowels.

3. Intone the syllables *ya*, *ye*, *yi*, *yo*, *yu* in quick succession on each note of a scale of five tones, beginning at the pitch of the *whispered* resonance of the Natural vowel. Great care must be exercised in attacking each syllable to make the motion of the lower jaw for *y* with precision and *deftness*, in order to preserve its consonantal quality; if the articulation be weak and slovenly, or made with the tongue only, the *y* reverts to its corresponding vowel form, causing the syllables to degenerate into a series of mixed vowel resonances without any focussing consonant, thus losing all character and resulting in a drawling enunciation—as, *i-es* for *yes*, *i-acht* for *yacht*, etc.

h

As the ability to attack a consonant properly depends chiefly upon correct manage-

ment of the breath, the student should begin his study of the same by exercises for producing the *aspirate*. Taking it for granted that he has already had sufficient instruction in the science of breathing to enable him to control and direct the column of breath for the three forms of utterance, *effusive*, *expulsive*, and *explosive*, we will proceed at once to the exercises for the production of this consonant. As the word *aspirate* indicates, *h* is merely a breath, or, to be more accurate, a special manner of propelling the breath into the vowel-chamber. This is done by a movement of the diaphragm and glottis more or less vigorous, according to the character of the word in which it occurs and the form of utterance demanded for the same; for example, in the phrase *the enemy halted* the movement of the diaphragm for the *h* in *halted* is much less vigorous than for the same consonant in the order *Halt!* as given by a military commander, the former corresponding to the *expulsive*, the latter to the *explosive* form of utterance while in the exclamation *ah!* the motion is so slight as to

be almost imperceptible, a muscular *relaxation* by which the breath is gradually and gently emitted, as in the *effusive* form of utterance. This movement of the diaphragm is accompanied by a particular contraction of the glottis which distinguishes the aspiration of *h* from the ordinary voice impulse for the division of the syllable. For example, in the military commands *Halt! Aim! Fire!* the movement of the diaphragm is exactly the same for the attack of the three syllables; on the word *Halt!*, however, there is also a firmer and closer contraction of the glottis, causing the breath to issue from the larynx with a sudden *puff*, producing the peculiar form of aspiration that characterizes the *h*. If the same contraction of the glottis be used in the attack of the word *aim*, however, the result will be the "cockney" pronunciation *h'aim*. This demonstrable fact is indeed sufficient proof that the *voice impulse* alone and *not* the vowel impulse is regulated by the glottis.[1]

[1] It also explains the fact noted by Doctor Scripture, that no record of *h* is made by his instrument for

There is no greater mark of illiteracy than this failure to distinguish between the aspiration of the *h* and the ordinary vowel attack, a fault of speech very common among the uneducated classes in England, where such persons may perfectly be heard to say *'is 'ead hand 'is 'and*, for "his head and his hand." This is a violence never done to the language in America. The most illiterate American never drops his initial *h*, though there be many, even among the educated classes, who, in common with our cousins across the water, omit the aspirate in the combination *wh*, pronouncing such words as *white*, *where*, *when*, *why*, as *w'ite*, *w'ere*, *w'en*, *w'y*.

This defect in the aspiration of the *h* should be corrected by increased action of the diaphragm *only*. The contraction of the glottis should never be deliberately practised or taught, especially in the case of the vocal student, as it is apt to affect the attack

recording speech "curves," although when the record is repeated by the phonograph the missing *h* is distinctly heard. (See "Notes and References," page 316.)

of the tone, producing the *coup de glotte*, rightly considered by many vocal authorities a pernicious and dangerous habit for singers. In speech, the contraction of the glottis for *h* is involuntary, as all action of the larynx should be. It is, in fact, a sort of reflex of the action of the diaphragm, and if the latter be sufficiently strong and elastic to direct the column of breath properly, the contraction of the glottis will be automatic and correct, regulating the puffs of air in exact proportion to the amount of breath pressure demanded for the aspiration of *h*, according to the *effusive*, *expulsive*, or *explosive* form of utterance.

In German the aspiration of the *h* is even more marked than in English, especially in such consonant combinations as *ach*, *ich*, *doch*, *Mädchen*, *rauschen*, etc. In Italian, on the contrary, the *h* is always silent. The French claim to aspirate this consonant in certain words, but its aspiration is so feeble as to be imperceptible. In fact, they merely emphasize its omission by pronouncing the preceding vowel and *not* pronouncing the

preceding consonant, as they do in case of the silent *h*. For this reason Italian and French people who wish to acquire a good English accent, as well as English students who desire to correct or perfect their pronunciation, including *all* public speakers and singers, should practise carefully the following exercises for the *aspirate:*

(1). Inhale deeply through the nostrils with mouth closed until the diaphragm is fully expanded and the lungs are well filled —but not unnaturally inflated; then, while holding the chest well up, drop the lower jaw, without moving the tongue from its normal position, and exhale the breath in a steady, even flow by a gradual relaxation of the diaphragm, as in effusive utterance, giving a gentle, contented *sigh*. Repeat with the tongue in Low Middle position, forming the syllable *ah!* first on a speech tone, then on a vocal note.

(2). Inhale as in Exercise (1), and while intoning the Low Middle vowel *a*, expel a portion of the breath by a slight contraction of the diaphragm *without perceptibly inter-*

rupting the emission of the stream of resonance, forming the syllable *aha*, as in ordinary expulsive utterance. Repeat on scale of five notes. Repeat again with tongue at High Middle, High Front, Mid Back, and High Back positions, thus giving scales on each of the five cardinal vowels.

(3). Inhale as in Exercise (1); then, with tongue in Low Middle position, exhale the breath in five successive puffs by a quicker and somewhat more forcible contraction of the diaphragm, forming the syllables *ha! ha! ha! ha! ha!* as in laughing. Repeat on *descending* scales of five notes. This exercise, if carefully and persistently practised, will give a musical ringing laugh, and also greatly aid the singer in the production of staccato passages.

(4). Repeat Exercise (2) with a sudden and vigorous contraction of the diaphragm, *exploding* the breath as in calls, cries and military commands, such as *Help! Halt! Ship ahoy!* etc.

Exercise (2) for the aspirate should be repeated in combination with

w,

which is also an incomplete articulation, being merely a rounding of the lips without contact of the same. As this motion brings the lips into the position they take for rounding the High Back vowel, it produces a sound slightly resembling the resonance of that vowel, and if the consonantal character of the *w* is not maintained by a firm, vigorous action of the lip muscles, the result in such words as *was*, *west*, etc., will be merely a weak mixed vowel *oo-as*, *oo-est*, giving a blurred and slovenly enunciation of every syllable in which this consonant occurs. If the proper muscular tension be lacking in the articulation of the combination *wh*, both the *w* and the aspirate are sacrificed.

When the student has succeeded in applying Exercise (2) for the aspirate to the combination *wh*, the same exercise should be repeated in full with *w* alone forming the syllable *awa* on scales, with the five cardinal vowels. Care should be taken in these exercises on *w* alone to round the lips with great

force and precision, but so *deftly* that no sound of the High Back vowel is allowed to interrupt the flow of the other cardinal vowels, thus adding to each a secondary resonance. Speakers who have a tendency to omit the aspirate in *wh* should alternate the syllable *awa* and *awha* on each note of the scales until able to give the aspirate its correct value in such sentences as *Where* do you *wear* it? *Which* is the *witch?* and others given in the "Sentences for Practice," page 279.

W is a peculiarly English consonant. In German it is combined with the motion for *v*. The expression "double *u*," as the consonant is called in English, tends to confuse all foreigners. It does not exist in Italian or French, except in words borrowed from German or English sources.

Having gained flexibility of the lower jaw by the exercises for *y;* control of the breath by practice of the aspirate; strength and flexibility of the lips by rounding the same for *w* and *wh*, the student is now ready for the more complicated articulations produced by contact of two of the organs of speech,

with or without resonance. For example, the consonant *b* is made by bringing the lips together while the breath is emitted from the larynx with a slight humming sound. If the same motion of the lips be repeated without any humming of the cords, the unvocalized breath being emitted through the mouth only and checked by the lips, the result will be the consonant *p*. These articulations, as we have already said, should never be practised alone. As soon as the student is able to feel the difference in the *sensation* produced by the contact of the two organs, with and without resonance, he should proceed at once to the following exercises for the *labials:*

b, p; v, f; and *m.*

Inhale deeply through the nostrils with the mouth closed; relax and drop the lower jaw to the singing position, with the tongue at Low Middle position; then while intoning the vowel *a*, bring the lips together with a firm but gentle pressure, without interrupting the flow of the upper stream of resonance,

thus forming the syllable *aba*. Repeat with unvocalized breath, forming the syllable *apa*. Sing each of these syllables on a scale of five notes, then repeat, alternating the two on each note of the scale until perfect control of the two motions *by the sense of touch* is established. The scales should then be repeated on each of the five cardinal vowels, as in the exercises for *h* and *w*.

For the labials *v* and *f* the exercises are the same, except that instead of bringing the lips together, the lower lip is pressed against the upper teeth; the motion for *v* being made, as in the case of *b*, with distinct resonance; that for *f* with unvocalized breath. In German the non-resonant form of this consonant is used for both *v* and *f*. (For the German manner of articulating *final v* and *f*, as well as *b* and *p*, and *d* and *t*, see page 119.)

For *m* the motion of the lips is the same as that for *b*, but the veil of the palate is slightly depressed, allowing the vibrations from the larynx to pass into the face-mask, thus altering the character of the resonance by a slightly nasal quality; for this reason

the exercises for *m* must be varied as follows:

Inhale deeply *through the nostrils with the mouth open*, thus depressing the veil of the palate. Bring the lips quickly but gently together and exhale slowly through the nostrils with a soft huming sound, the vibrations of which should be felt distinctly in the resonators of the face-mask, and should produce a tingling sensation even on the lips; then, without interrupting the flow of this resonance, drop the lower jaw with the tongue in Low Middle position, forming the syllable *ma*. Repeat, reversing the process; that is, while intoning the vowel *a*, bring the lips together with the veil of the palate depressed, producing the resonant consonant *m* without interrupting the flow of the upper stream of resonance, thus forming the syllable *ama*, which should be practised in the scales of five notes with each of the five primary vowels, as in the exercises for the preceding consonants.

When the labials have been thus perfected,

the same exercises should be applied to the motions of the *lingual* consonants

d, *t*; *l*; *n*; *r*; *g*, *k* (or *q*).

These consonants are produced by bringing the tip of the tongue in contact with the hard palate. For *d* and *t* the point of contact is just behind and above the upper front teeth, the motion for *d* being accompanied by distinct resonance, that for *t* with unvocalized breath. In Italian and French the motions for *d* and *t* are not only made with greater delicacy—as, indeed, are all articulations in these languages; but the point of contact is further to the front—in fact, almost on the teeth, as in the English *th*. (A perfect Italian or French *t* may be acquired by practising the motion for *t* at the point of contact for English *th without the aspirate*.)

l

In *l* we have the most marked instance of the change in the character of a consonant by its *point of coincidence* (see page 105) with the vowel. In such syllables as *last*,

long, *loll*, *lull*, etc., where the conjunction is with a Middle or Back vowel, the tip of the tongue, *well rounded*, touches the hard palate just back of the point of contact for *d* and *t;* but with the front vowels, as in *late*, *least*, *little*, etc., it is much farther forward and the tip *pointed.* The exercises on the syllable *ala* should, therefore, be repeated only with the first motion; scales on *la*, *la*, however, should be repeated (as in Exercise (6), page 263) with the Low Front instead of the Low Middle vowel, in order to keep the point of contact well forward. Both forms of the consonant are resonant, but only the more refined and delicate motion for the forward *l* is used, in singing, in all languages, and for the Italian and French *l* always, except (in French) when the latter is preceded by *i*, when the resonance of the consonant is merged into that of the vowel by the process known as *mouillure*, or "liquefying," as in the Parisian pronunciation of *travail*, *soleil*, *famille*, *souiller*, etc. The German *l* follows the rules for the two English forms of articulation.

r

The consonant *r* is, without doubt, the most difficult articulation in all speech. The process is rarely the same in any two languages, and for this reason nothing in speech so quickly betrays one's nationality, or provinciality, as the manner in which this consonant is articulated. As in the case of the vowel resonances, the Italian *r* is the purest and most agreeable to the ear, and is the standard adopted in singing by artists of every nationality. It consists of a slight trilling sound produced by blowing the breath forcibly against the tip of the tongue, the side muscles being at the same time pressed against the hard palate, the point of contact being regulated by its point of coincidence with the following vowel or consonant, as in the case of *l*.

To this movement of the tongue the French add a slight motion of the veil of the palate, producing the more delicate and subtle sound known as the "Parisian" *r*. Foreigners, especially English-speaking people, who

attempt to imitate this veiled and softened trill before the necessary flexibility of the veil of the palate has been acquired by proper exercises for the same, may be sure that they only succeed in producing the coarser and more provincial sound termed by the French the "fattening" of the *r*. This *r grasseyé* resembles less the Parisian than the guttural German *r*, in the articulation of which the *uvula* as well as the veil of the soft palate is moved, producing a more throaty trill, further characterized by a slight aspiration of the breath.

The English initial *r* has all the purity of the Italian articulation, but when final or followed by another consonant it is articulated in an entirely different manner. In fact, we have *three* distinct manners of producing this consonant, as follows:

(*a*) When followed by a vowel, as in the words *race*, *charity*, *sorrow*, the *r* or *rr* is produced by a slight trill of the tip of the tongue in the Italian manner;

(*b*) When followed by another closing consonant, as in the words *arm*, *herd*, *world*, *turn*,

etc., the articulation is made by lifting the sides of the tongue to the hard palate or upper teeth, *without any movement or trill of the tip;*

(*c*) When final, the sides of the tongue, instead of being lifted, are pressed outward against the *lower* teeth, producing an incomplete articulation which merely broadens the preceding vowel, and hence is sometimes called the "vocal" *r*, the word *star*, for example, being pronounced as if spelled *staah*, with a slightly lengthened resonance *on a single voice impulse*, never as a mixed vowel with two resonances.

If the final *r* occurs before a word (in the same phrase) beginning with a vowel, it is articulated with a very slight movement of the tip of the tongue, which might be called an incomplete trill, much more delicate than when the vowel occurs in the same syllable. If the following word in the same phrase begins with a consonant, the *r* is articulated in the second manner with the sides of the tongue, according to the regular rule (*b*).

In short, the *r* should never be "trilled"

in English speech except when *opening on a vowel.* If trilled before another consonant or at the end of a phrase, the result is the labored and harsh articulation known in America as the "Western" *r*, because heard chiefly in the Western and Northwestern States; but considered, alas! by those Europeans who judge us by the average tourist, the distinctive "hall-mark" of American speech.

An equally uncultured if less harsh articulation of this consonant obtains in certain Eastern States, including sections of Greater New York itself, where the *r* is transformed into a hybrid resonance which can only be inadequately indicated by writing words such as *girl, clerk, hurt* in two syllables—as, *ge-il, cle-ik, hu-it.*

On the musical but indolent Southern tongue the *r* loses its consonantal character entirely, the vocal *r* alone being used generally throughout the Southern States, where the real "trill" of this consonant is rarely heard, even before a vowel.

All American students who have acquired

either of these defective or exaggerated articulations should practise with great care the regular exercises for *r* on the scales of five notes with the cardinal vowels. All students, singers and public speakers especially, should practise trilling the *r* in syllables containing such combinations as *br*, *pr*, *dr*, *tr*, etc., before each of the primary vowels—alternating the resonant and non-resonant consonants, as follows: *bra*, *pra*, *dra*, *tra*, *stra*, etc.—for rapid articulation of these difficult combinations with both precision and delicacy.

g, *k* (or *q*)

The only consonant motions made by the back of the tongue, or, more correctly speaking, back of the middle position, are the *g* and *k* (or *q*), the former being resonant, the latter non-resonant. The point of contact being just back of that for *r* (before another consonant), great care should be exercised, especially in singing, not to exaggerate the *clicking* sound peculiar to the non-resonant form of the consonant (*k* or *q*), made by con-

tact of the tongue and hard palate in a position demanding great muscular effort for the articulation. In the case of final *g*, the Germans modify the harshness of the articulation by slightly aspirating the consonant.

s, z, sh, th, ch, j, c, x

We come next to a class of consonants produced by forcing the breath through a narrower aperture, made by pressing the sides of the tongue more closely against the hard palate, than that made for the other linguals. These are sometimes called the *sibilants*, because of the hissing or buzzing sound thus made.

In *s* and *z* the breath is forced over the tip of the tongue, giving to the latter, which is resonant, a *buzzing*, and to the former, which is non-resonant, a *hissing* sound. The resonant form of this articulation is often substituted for the non-resonant. For example, the initial *s* in German and the final *s* in English, and in the French *liaison* take the sound of the English *z*, which is also substituted for the *s* in all four languages when

the latter occurs between two vowels, except when double. In Italian and German, *z* has the sound of *ts*. The Italian *sc* before *e* or *i* is pronounced like the English *sh*, which though written with two letters is only *one sound*, and differs from *s* only in the broadening of the aperture by the greater force of the aspiration for *h*.

If the fricative pressure for *sh* be reversed so that the tip of the tongue comes in contact with the upper front teeth while the breath is forced over the sides, the result will be the peculiar English consonant combination *th*, which has both resonant and non-resonant forms, as in *thine* and *thin*. It is, however, like *sh*, only *one* sound.

The English *j*, on the contrary, while written as one letter, represents two sounds, being produced by "sibilating," so to speak, through the resonant consonant *d*. This is a peculiarly English consonant, and exists in none of the other languages considered in this work. The French have the same letter, which, however, merely indicates a sibilant *vowel* sound, produced by forcing the breath

more strongly through the High Front vowel shape, and therefore often called the "long" *i* in reference to the written symbol.

By forcing the breath through the corresponding non-resonant consonant *t* we obtain the *English* sound of *ch*, as in *chaste*, *child*, etc. This letter is apt to prove confusing to students of various languages, as it represents a different sound in each. In French it stands for the sound corresponding to the English *sh*, as in *charme*, *choux*, etc. In Italian it has the sound of the English *k*, as in *che*, *chi*, etc. In German *ch* represents a manner of *aspirating* through an aperture wider than that of *sh*. This is done *at the point demanded by the position of the tongue for the preceding vowel.* When preceded by a Front vowel, the process takes place at the Front position, as in *ich;* while in *ach* it is at the Middle, and in *doch* at the Back position.

The sibilants offer the greatest difficulty to be encountered in singing German or English, especially the latter, in which they abound to a degree absolutely painful to the

Latin ear. For this reason, the exercises (which are the same as for the preceding consonants) should be practised with great care to modify the hissing sound of the non-resonant *s*, especially when followed by another non-resonant consonant, such as *st*, *sp*, etc. The Germans accomplish this by aspirating the *s*. In the case of final sibilants, both resonant and non-resonant, the pressure of the tongue must be released with *the release of the tone*, or else the *hiss* or *buzz* (especially in concerted or chorus work) will trail off like the fuse of a sky-rocket.

In *x* we have another example of a single letter representing two consonants. It is produced by sibilating through the "back" consonants *g* or *k*. With the resonant *g* it gives the buzzing sound of *gs* heard before a vowel in such words as *exact*, *exist*, etc., while with the corresponding non-resonant *k* it gives the hissing click heard in the words *excuse*, *expose*, etc.; this non-resonant form is used chiefly before consonants.

C is unique among consonants, having no individual sound in any language. In Eng-

lish and French it takes the sound of *s* before *e* and *i;* in German the sound of *ts;* in Italian the sound of the *English ch;* while before *a*, *o*, and *u*, in all four languages, it takes the sound of *k*.

n; nd, nt; ng, nk

For *n* the motion of the tongue and the point of contact with the hard palate is the same as for the *initial l*, but at the same time the veil of the palate is slightly depressed as for *m*, giving a nasal resonance to the consonant. Great care must be taken in articulating this consonant not to let the resonance of the vowel preceding or following be divided with the stream of the breath by this lowering of the palate, thus giving a nasal "twang" to the entire syllable, a fault distressingly common in certain sections of America, especially in New England outside of Boston. The only nasal sounds in English are the resonances of *m* and *n* and certain consonant combinations of which these resonances form the basis, such as *mb*, *mp*, *nd*, *nt*, etc.

When *n* is followed by another resonant consonant in English, Italian, or German, the two resonances are blended into a single sound, as in the words *sand* and *sang*. Germans and illiterate and careless English speakers are apt to give *both sounds* to combinations containing the corresponding non-resonant consonant, as in *plant* and *sank* (*plandt*, *sangk*).

In order to give these combinations their proper resonances, the student should practise lists of words, such as *and*, *ant*; *send*, *sent*; *thing*, *think*; *sung*, *sunk*, etc., until able to render the consonantal value of each class with delicacy and precision, and without confusion of the vowel and consonant resonances.

Singers who have a tendency to exaggerate the hissing, clicking, or grinding noises made by the conjunction and separation of the organs of speech for the processes of articulation should practise the words in which the non-resonant consonants occur, by substituting the corresponding *resonant* consonant until all such sounds are eliminated

and the *motions* for the former are as delicate as the latter. For German, on the contrary, all consonant motions must be exaggerated in practise by English as well as French and Italian students.

Exercises for practise of each of the consonants in reading will be found in the "Sentences for Practise," page 279.

VAGARIES OF ENGLISH ARTICULATION

Foreign students should note carefully the following vagaries of articulation peculiar to the English consonants:

ASPIRATED CONSONANTS

The sound of *sh* or *zh* is sometimes given not only to *s* and *z*, but to *c*, *sc*, *g*, *t*, and *x*, as in the following examples:

S takes the sound of *sh* before *ea* and *ia* in unaccented syllables, as in *nausea*, *Asia*, *Persia;* and in the ending *sion*, when preceded by a consonant, as in *tension*, *version*, etc.; but when preceded by a vowel the

sound is that of *zh*, as in *occasion*, *adhesion*, etc. The *s* is also aspirated in *sugar* and in *sure* and its compounds *insure*, *assure*, etc., when the syllable is tonic; but when *sure* forms an unaccented syllable, as in *measure*, *treasure*, etc., *s* takes the sound of the aspirated *z*, as in *azure*.

C often takes the sound of *sh* before *ea*, *eo*, *ia*, *ie*, and *io*, in unaccented syllables, as in the following examples: *ocean*, *herbaceous*, *racial*, *ancient*, *gracious*, etc.; but in *enunciation* and *pronunciation*, the best usage tends rather to the unaspirated sibilant.

Sc is aspirated in unaccented syllables, such as *conscious*, *conscience*, *prescience*, *omniscience;* but in *science*, *sc* takes the pure sibilant sound, as in all tonic syllables, according to the regular rule for *c* before *e* and *i* (*k* before *a*, *o*, and *u*).

G takes the sound of the aspirated *z* in *melange*, *mirage*, *persiflage*, *rouge*, and other similar words borrowed from the French.

Let the student also note here that although *g* usually takes the sibilant sound of

j before *e* and *i*, it retains its normal non-resonant form in the following words:

gibber	gild	gird
gibbous	gills	girdle
giddy	gilly	girl
gig	gimlet	give
giggle	gingham	gizzard

T takes the sound of *sh* in unaccented syllables before *ia*, *io*, etc., as in the case of *s* and *c*: *dementia*, *palatial*, *satiate*, *ratio*, *potion*, *propitious*, etc.

th

Although *th* is always aspirated in English, it has two sounds, one of which is resonant, as in *thine;* the other non-resonant, as in *thin*. When it occurs as a final consonant it is always non-resonant, except in the words *beneath* and *bequeath*, and the preposition *with*, which, according to the best usage, take the resonant form. When substantives ending in *th* are pluralized or changed into verbs, adjectives, etc., by the addition of *s*, silent *e*,

er, *ern*, etc., they usually take the resonant form, as in the following examples:

Non-resonant	*Resonant*
bath	bathe
breath	breathe
cloth	clothe, cloths, clothier, etc.
faith	
fourth	
	father, farther, further
heath	heather
lath	lathe, lather
loath	loathe
quoth	
moth	moths, mother
	rather
scath	scathe
sooth	soothe
south	southern
swath	swathe
tooth	toothsome
truth	truths
wrath	
wreath	wreathe
youth	youths

When used as an initial consonant, however, the resonant and non-resonant forms are applied so indiscriminately that they can only be acquired by usage, and, for the

foreign student, practise of such lists as the following:

Resonant	*Non-resonant*
than	Thane, Thanatopsis, etc.
that	thank, thatch, thaw, etc.
the, thee	theatre, theft, theory, and all Greek derivatives in *theo.*
their	thief
them	theme
then, thence	
there	thermometer
these	theses, thesaurus, etc.
thine	thin
this	thistle, thick, thigh, third, thirst, etc.
thither	
those, though	thorough, thong, thorn
thou	thousand
thus	enthusiasm, thumb, thunder, Thursday
	thrall and all other words with *thr*

X takes the sound of *sh* in a few words such as *anxious, complexion, flexion, noxious,* and *luxury;* but when initial, or in other words from the Greek, it has the normal resonance of *z*, as in *Xavier, xenia, xantheine, xylophone.*

SILENT CONSONANTS

In the words *heir*, *homage*, *honor*, *hour*, and their compounds, *h* is silent; but in *herb*, *humble*, and *humor* and its compounds, the best usage is to aspirate the consonant fully, though certain authorities give the silent *h* as a secondary pronunciation.

In monosyllables such as *lamb*, *limb*, *comb*, etc., the *b* is silent, the *m* alone is articulated; but in words of more than one syllable, such as *chamber*, *combat*, *slumber*, both consonants are articulated according to the regular rule of English syllabication. In *debt* and *doubt* and their compounds *b* is always silent.

In the words *enough*, *rough*, *tough*, *laugh*, *cough*, *hough*, *lough*, *trough*, *gh* is pronounced like *f;* when it occurs as an opening consonant the *g* alone is sounded, as in *ghostly*, *ghoul*, *ghost*, etc.; in other cases both letters are silent. G is also silent when occurring with *m* or *n* as a closing consonant, as in *apothegm*, *phlegm*, *malign*, *sign*, etc.; but when the *m* or the *n* is used as the opening consonant of a following syllable, the *g* is

pronounced according to the regular rule, as in *signal*, *malig-nant*, *phleg-ma-tic*, etc.

The same rule obtains in the case of the combination *mn:*

autumn column solemn condemn	*n* silent	autumnal columnar solemnity condemnation	both *m* and *n* sounded

In the combinations *lf*, *lk*, *lm*, the *l* is sometimes silent and sometimes sounded:

half walk balm	*l* silent	self bulk elm	*l* sounded

The combination *ng* is sometimes articulated as two separate consonants, as in *anger*, *danger*, *finger*, *longer*, *plunging*, etc.; again the two consonants are moulded into one so-called nasal sound, as in *sang*, *singer*, *longing*, *lungs*, etc.

The combination *ph* has the sound of *f*, as in *pharynx*, *philosophy*, *phlegm*, etc., while in *pn* and *ps*, as in *pneumatic*, *pneumonia*, *psychology*, etc., the *p* is silent.

STUDIES IN ARTICULATION

"LIQUEFIED" CONSONANTS

The process known in French as "*mouillure*," or liquefying the consonant by adding the sound of *y*, occurs occasionally in English with *t* and *d*, but must be used with great discretion, and the *y* never allowed to degenerate into the sound of *j* or *ch*. For example, in the words *verdure*, *literature*, *tedious*, *educate*, *courteous*, etc., the pronunciation "verdyur," "literatyur," etc., is admissible, but foreigners should carefully avoid "literachur," "tejus," "edjucate," etc., as often heard in England (and even "immejitly" and "Chewsday" for *immediately* and *Tuesday!*).

N, when followed by *io*, as in *junior*, *senior*, *onion*, *bunion*, etc., takes the "liquid" sound of *gn* as in the Italian Sig*n*ora, French Seig*n*eur, etc.

IV

STUDIES IN ENUNCIATION

THE complete process of enunciation—the utterance or "giving forth" of thoughts in the form of syllables and phrases, which includes the processes of articulation—demands, in addition to the strength and flexibility of the organs of speech needed for the latter, absolute *co-ordinate* control of those organs, and also the perfect adjustment of all the resonators above the larynx, upon which correct emission of the voice, either in speech or song, depends.

During the writer's earlier efforts to formulate a system of exercises that would bring about these ideal conditions, she found that merely putting the tongue, lips, etc., through a course of ordinary gymnastics, while it secured a certain amount of muscular strength

and flexibility of the organs of speech, did not give the singer the *co-ordinate* control of the *intrinsic* and the *extrinsic* muscles of the tongue necessary to co-ordinate the two processes of tone-production and word-production in singing. This, she has since found by experiment and demonstration, can only be gained by gentle, rhythmic exercise of the muscles, after the manner in which they are used in normal speech; that is, by *alternate and properly balanced tension and relaxation.*

The following exercises—which have never failed to secure the desired results when correctly and regularly practised—are based entirely upon this principle of rhythmic normal action. If done in a perfunctory manner, however—only occasionally, or too long at a time, or without the intervals of complete relaxation, and, above all, without regard to the special muscles used—they will be found of little use to either singers or public speakers. For example, Exercise (3) brings into play both the *intrinsic* and *extrinsic* muscles of the tongue in order to enable the student to feel the action of both;

but, as his ultimate object is to gain perfect control of the *intrinsic* muscles, *without bringing the extrinsic into play*, the muscles of the *tip* of the tongue alone must be tensed. If the first result of the exercises is to make the tongue "feel like a ball in the mouth," as Mr. Davies says, the student may be sure that he is not doing the exercises correctly, but is bringing the *extrinsic* muscles into play. He must also take particular care never to tense the muscles of the *back* of the tongue, which forms the front wall of the throat, the muscles of which must be left perfectly free and relaxed during all the exercises. In all the processes of articulation and enunciation, indeed, only the muscles of the *front half* of the tongue are used.

The distances between the positions for the different vowels being so very slight, the movements must be correspondingly delicate, especially in widening and narrowing the tongue. But the effect upon the vowel resonance of the very slightest change in these positions is almost beyond belief to one who has not made a practical study of

the subject; and when the student is able to control perfectly these delicate movements, he will possess the key that unlocks all the mysteries of "accent" and the remedy for all faults of speech.

EXERCISES FOR THE ORGANS OF SPEECH

(1). Drop the lower jaw downward and backward by relaxing the muscles completely until two fingers can be inserted between the teeth without touching the same, taking care not to move the tongue from its normal position. Repeat four times. Practise also the exercises in articulation (pages 224-250) and the sentences under *y* (page 279).

(2). Drop the lower jaw, tongue in normal position; advance the lips, forming the consonant *w* without any sound, taking care not to close the teeth nor move the tongue. (Four times.)

Repeat four times the words *woo*, *coo*, *quest*, exaggerating the movement of the lips, and taking care not to close the teeth in changing position of the tongue from High

Back to High Middle for the mixed vowel in *quest.*

Drop lower jaw, tongue in normal position; form the consonants *m*, *b*, *p*, *v*, and *f* by the lips alone, *without any sound* and without closing the teeth. (Four times.)

(3). Drop lower jaw; while (mentally) counting four, thrust the tongue *slowly* outward as far as possible without straining the root or touching the teeth, *tensing the muscles at the tip only;* on the fifth beat relax the muscles suddenly and completely, letting the tongue slip back to normal position without moving the jaw.

(4). Drop lower jaw, with tongue in normal position; while (mentally) counting four, slowly lift the tip until it touches the hard palate just back of the front teeth, tensing muscles of tip in lifting, and relaxing same in returning to normal position. Repeat four times, each time touching the hard palate at a point farther back.

(5). Repeat Exercise (4) three times with the consonants *t*, *d*, *l* on the Natural vowel, forming the syllables *t*(*er*), *d*(*er*), *l*(*er*), trill-

ing the tip of tongue on the last *r* only. Repeat syllable *l(er)* before each of the cardinal vowels, exaggerating the trill. Then the syllables *ra, re, ri, ro, ru* (cardinal vowels) until trill is perfected.

(6). Drop lower jaw, tongue in *Low Front* position; and while intoning the Low Front vowel *a* (14), repeat first movement of Exercise (4), forming the syllable *la* as many times as possible *on a single emission* of the breath, beginning slowly and gradually increasing the speed of the movement, being careful to use the muscles of the *tip* of the tongue only, and not to blur the resonance of the vowel or permit the same to degenerate into the sound of the Natural vowel. (Four times.)

(7). Drop lower jaw; relax the tongue completely, letting the tip rest lightly upon the lower lip; while (mentally) counting four, slowly narrow the surface of tongue by contracting the transverse fibres (see Fig. IV), relaxing suddenly and completely on the fifth beat. Repeat, reversing the movement, widening the tongue by expanding

the same fibres outward, relaxing to the normal width on fifth beat, as before. (Each movement four times, then alternately four times.)

(8). Drop lower jaw well downward; lift tip of the tongue as for the consonant *t*, and, while pressing the tip gently against the upper teeth, slowly widen the *inferior lingual muscle* under the front part of the tongue by expanding the *transverse fibres* (see Fig. IV) outward during four beats, relaxing on fifth beat to normal position.

(9). Repeat second movement of Exercise (8) with the tip of the tongue held firmly down behind the lower front teeth, thus widening the surface or dorsum by using the muscles *under the front part of tongue*, as in the preceding exercise. (Four times each.) When this exercise is correctly done, with the lower jaw well relaxed, and a firm, *forward, downward,* and *lateral* pressure of the *inferior lingual* muscle at the *focal point* (see Fig. II), from which the entire mechanism of the tongue is controlled, the student will feel a sudden impulse to *yawn*, proving that

the muscles of the throat and of the back of the tongue are entirely relaxed. Hence, the practice of this exercise gives the most perfect adjustment of the tongue and the larynx for the processes of speech in singing.

(10). Repeat Exercise (9) while intoning the syllables *ma, ba, pa, va, fa,* thus widening the tongue on the vowel *ma ah, ba ah, fa ah,* giving the "broad" sound of *a* peculiar to that vowel in English when followed by the final ("vocal") *r,* as in *star.* Repeat on lists of words ending in *r* followed by *another consonant,* such as *stark, mark, barn, farm,* etc., lifting sides of tongue to upper teeth while holding *tip* firmly down behind lower front teeth at the *focal point* (see Fig. II).

(11). Drop lower jaw, tongue in normal position; and while holding the tip firmly down behind the front teeth, slowly lift the side muscles until the edges touch the upper teeth, tensing the muscles while counting four and relaxing quickly to normal position on the fifth count. This exercise for the

fibres of the *cortex* is absolutely necessary to secure control of the vowel forms in singing, especially in case of the High vowels.

(12). Repeat Exercise (11), lifting only one side of the tongue—first right, then left, or *vice versa*—until the edge touches the middle of the hard palate from the front teeth to the veil of the soft palate, taking care to use only the muscles of front part of tongue. (Four times each side, then alternately four times, tensing during four beats and relaxing on fifth to normal position.)

(13). Drop lower jaw, press tip of tongue lightly against the lower teeth, and while (mentally) counting four, advance the *superior lingual muscle* as far outward and over the lower teeth as possible without straining the root of tongue, tensing the muscles of the sides or *cortex* only, and relaxing completely to normal position on the fifth count.

(14). Whisper the High Front vowel (1) with the teeth closed naturally, noting carefully the position of the tongue *by the sense of touch;* if the preceding exercises have been

sufficiently and correctly practised, the sides of the tongue will be felt pressing against the upper teeth at the front position, while the tip remains well down behind the lower front teeth, and the student will be able, while *intoning* the vowel (*e* as in be), to drop the lower jaw downward to the proper position for singing *without changing the position* of the tongue. Great care must be taken not to lower the sides of the tongue, nor to let it slip backward. Nor should the lips be allowed to spread on this exercise, but the mouth should be kept well rounded, as for singing.

(15). Drop lower jaw; relax tongue completely, letting it drop as far as possible outward and over the lower lip without pushing or straining; then, while counting four (mentally), tense the muscles of tip alone, turning the same backward until it rests upon the middle of the tongue; on fifth count relax suddenly and completely, letting the tongue spring out over lower lip with a lapping movement.

Repeat Exercise (15), folding the tip in-

ward as the tongue turns backward like the curled petal of a flower. (Four times.)

(16). Drop lower jaw, tongue in normal position; and while (mentally) counting four inhale deeply and slowly through the nostrils only, *with the mouth open*, then exhale quickly on fifth count through the mouth alone. Repeat until the action of the veil of the palate is distinctly felt, descending on the first and rising again on the second movement.

These exercises are to be used only *as exercises*. The student should not try at once to maintain the different tongue positions in singing, but merely while *intoning* words on the line of resonance. When the intrinsic muscles are sufficiently strong and flexible, the tongue will adjust itself naturally to the correct *point of resistance* for each vowel, *provided the tip is kept properly adjusted at the point of support*, which should soon become habitual and subconscious, as all muscular action should be, in singing as in speaking.

EXERCISES IN RESONANCE

Having secured muscular strength and flexibility of the organs of speech, and co-ordinate control of the same by the preceding exercises, the student is now prepared to obtain the perfect adjustment of the resonators above the larynx necessary to maintain a properly balanced flow of the two streams of the divided breath, on which correct emission of the voice, as well as its resonance and beauty of timbre, largely depends both in speaking and in singing.

Many singers obtain this adjustment by humming gently the resonant consonant *m* with the special vowel, or vowels, chosen by the vocal instructor for "placing" the voice. This is the best possible means to the desired end—*as far as it goes*. Humming on *m* alone, however, merely serves to start the vibrations on the *upper* stream of the breath, the closure of the lips for this consonant checking the lower stream entirely. But if, while humming *m*, the lips are opened and the

tongue lifted quickly to the hard palate with the pressure for *n*, the vibrations in the vowel-chamber also are aroused and emitted on the lower stream of the breath. By alternating the two consonants (*m* and *n*) without *any* distinct vowel sound at all, on a steady gentle hum of the vocal cords, a continuous *sworl* of vibrations is kept up which soon fills *all* the resonators above the larynx, producing a continuous line of resonance, which can be increased or diminished at will by proper breath pressure, without any strain upon the larynx or cords whatever.

When the student has obtained perfect control of this line of pure resonance, he has only to practise the same with the tongue in the correct position for each of the vowels, in order to secure the maximum of resonance for each vowel, *beginning always with the High Front vowel* and moving from that position to each of the others in succession.

The writer has found that the best results are obtained by intoning thus each of the five *cardinal* vowels in syllables beginning with *m* and closing with *n*, until the full

quota of resonance is obtained; then dropping first the *n* and finally the *m*, and intoning the vowels alone in rapid succession *without altering the adjustment of the two streams of the breath.*

(1). Inhale deeply; close the teeth naturally, and gradually expel the breath with a soft hissing sound, forming the consonant *s*, forcing all the breath through the teeth by a steady, gentle contraction of the muscles controlling the diaphragm.

Repeat, and while hissing, suddenly close the lips without arresting the action of the diaphragm, thus forcing the breath through the face-mask instead of the vowel-chamber and changing the hissing to a humming sound, forming the consonant *m*.

Alternate the *s* and *m* until the direction and sensation of the divided breath, flowing first through the vowel-chamber and then through the face-mask, can be distinctly felt and perfectly controlled by the action of the muscles controlling the diaphragm.

(2). Close the lips gently, producing the

consonant *m* as in Exercise (1); then, without interrupting the flow of the resonance, open the lips and lift the *tip* of tongue to the hard palate, thus producing the consonant *n;* alternate four times, being careful not to move the back of the tongue. This exercise should be repeated until the vibrations of the voice are distinctly felt in the face-mask and in the head, producing *a continuous stream of pure resonance, without any distinguishable vowel sound whatever.*[1]

(3). Drop the jaw with tongue in High Front position; alternate the movements for *m* and *n*, while intoning the vowel *e* (1), forming the syllables *me*, *ne*, until the vibrations of *tone* are distinctly felt in the resonators of head and face, while the vibrations of the *vowel* are felt at the same time *in the vowel-chamber only.*

(4). Repeat Exercise (3); then, without

[1] Great care must be exercised not to *pronounce* the *m* and *n* "em" and "en," as in the alphabet. The sound, if kept well forward by correct action of the lips and tip of tongue, will slightly resemble the syllables "min," "nim" (*i* as in *minute*), and should never be allowed to degenerate into the resonance of the Natural vowel.

interrupting the stream of pure resonance, drop the tongue gently but quickly during the emission of the syllable *me* from the High Front to the Low Middle position, thus changing the vowel resonance from that of *e* to that of *a*, *on a single breath impulse*, forming the syllable *me-ah*. If the mouth be kept well open, the motion of the tongue made with swiftness and delicacy (without any motion of the lower jaw, which would cause a *y* to intervene in changing the shape of vowel-chamber, and thus forming the heavy and incorrect articulation *me-ya*), and the vibrations of the vowel kept well forward under the palatal arch, the brilliancy of vowel resonance thus gained will give a clear, ringing, forward *a* (25), and add much brilliancy to the tone as well, in singing that "darker" vowel.

(5). Repeat Exercise (2), and without interrupting the stream of resonance, draw the *side* muscles of the tongue slowly and gently backward *without lowering the point of resistance* and without moving the *tip* from the *point of support*, until the High Middle

position is reached, changing the vowel resonance from that of *e* in *me* (1) to that of *e* in *met* (15).

(6). Repeat Exercise (5), continuing the backward motion of the tongue, and at the same time advancing and rounding the lips until the *point of resistance* changes from High Middle to High Back. The distance is very slight, and tongue must be arrested as soon as the vowel resonance changes from that of *e* in *met* (15) to that of *oo* in *moon* (30).

(7). Repeat, changing position of tongue *in same manner* from High Front to each of the primary vowel positions in turn, then to those peculiar to the language under consideration, *moving always from High to Low and from Front to Back.*

(8). Repeat all these changes without any sound or resonance at all, until perfect control of the vowel forms through *the sense of touch* is established.

(9). Intone the English syllables *mean, mine* alternately, being careful not to let the tongue rise at the *back* when the pressure of

the lips is made for *m*, nor during the emission of the vowels, thus preserving the pure quality of the primary vowel resonance of these mixed or diphthongal sounds; and to articulate the *n* with the *tip* of the tongue, maintaining the consonant resonance by pressing the tip firmly against the hard palate until the lips close on the following *m* (then dropping the tongue to normal position during the *m*), thus keeping up a continuous unbroken stream of resonance.

(10). Intone in the same manner the syllables, *mine*, *main*, *mean*, *moan*, *moon*, vocalizing on the primary resonance of the mixed vowel sounds, the secondary resonance being heard only as the tongue rises for the articulation of the *n*, thus keeping the primary vowel resonances as pure as those of the corresponding Italian vowels *a*, *e*, *i*, *o*, *u* (25, 15, 1, 33, 30).

(11). When the student is able to intone the five words given in the preceding exercise with perfect control of the divided breath and the two streams of resonance, let him drop the *n* and intone the Italian syllables

ma, me, mi, mo, mu, until he can control and adjust the vowel resonance and the tone on these five cardinal vowels; finally intone the vowels alone, when, if he has obtained the correct adjustment of the resonators which these exercises should secure, he will be able to produce these or any vowel sound in any language (*provided he knows the proper tongue position for the same*), with its maximum of resonance.

Students of French and all singers should add the following exercises for the *double* French resonances called "nasal" vowels:

(12). Drop lower jaw, tongue in Low Middle position; and while intoning the vowel *a* (25) gradually lower the veil of the palate as in first movement of Exercise (16), page 268, *without moving the tongue*, when to the resonance of the vowel will be added a second resonance, slightly nasal in quality, producing the so-called *nasal* vowel peculiar to the French language, indicated orthographically by *an* or *am* (see pages 166–168). Then, while intoning the same vowel and *carefully maintaining the Low Middle position of the tongue,*

gradually lift the veil of the palate until only the primary resonance of the pure vowel is again heard. All students of French and all singers should repeat this exercise with the tongue on the Mid Back, the Low Front, and the High Middle Narrow positions, producing in turn the other French nasal vowels, *on, in, un.*

These exercises are also of great value in gaining proper control of the resonators of head and face in tone-production, and singers should add the practise of scales of five notes on each of the four French nasal vowels, with various consonants.

In practising these *double resonances* great care must be taken not to move the tongue during the emission of the vowel sound. If the back of the tongue is allowed to rise, as is instinctive with English-speaking people accustomed only to nasal *consonant* combinations, such as *nd, ng,* etc., the front vowel-chamber will be thus cut off, all the vibrations of voice forced into the resonators of head and face, the primary resonance of vowel obscured, and the sound of the *m* or *n* intervene.

(13). When Exercise (11) has been thoroughly perfected, the student should learn to increase or diminish the volume of each resonance *by means of the breath alone*, without *forcing* the fundamental or "cord" tone by any tension of the larynx. Beginning with the upper stream of the breath on *m*, and then gently opening the lips and dropping the lower jaw, without interrupting the flow of the resonance, increase and diminish the lower stream of the breath in same manner with each of the cardinal vowels until a perfect *crescendo* and *diminuendo* can be made on the resonant or "cavity" tones with any vowel.

Singers should practise the words of every song, oratorio, or opera they study, on this sustained line of resonance, phrase by phrase, until the diction is perfect, before they attempt to *sing* the same, beginning always with *n-m*, whatever the word may be, and returning to the same "hum" *between the phrases* to keep the resonators properly adjusted for the two streams of resonance. This will not only enable them to retain the

value of the spoken word in singing, but greatly facilitate their vocal work, and enhance the beauty of the tone by the reinforcement thus obtained from the vowel resonance. Public speakers and readers will find the exercises of equal value in giving resonance, brilliancy, and carrying power to the speaking-voice.

SENTENCES FOR PRACTICE

The following sentences have been selected, compiled or composed, at random, according to their value as mere exercises in the *technique of speech.* They embody the preceding rules, and *should be repeated until the action of all organs is easy and natural; the vowel clear and resonant; the articulation of the consonant distinct and unlabored; and the syllabication smooth and flowing.*

y

I saw a yacht and a yawl over yonder yesterday.

The yellow cat yawned and yawned.

Yes, ye yeomen, yield!

Youth yearns to be older, while age yearns to be young again.

"Take my yoke upon you."

h

Halt! Who goes there?

Ship, ahoy!

Ho there, ye hunters! hie ye hence over the high hills.
Hark! I hear the horn and the hounds.

"Hark, hark, the lark at Heaven's gate sings."

"Heigho! the holly,
Most loving's mere folly."

He had learned the whole art of angling by heart.

Lift your hearts to Heaven, be humble and human; hate not your enemies.

w

"Bid him welcome, boys! Were you a woman, youth, I should woo hard to be your groom."

"True hope is swift, and flies with swallow's wings."

"Beside him lay his staff of yew, with withered willow twined."

"Soft and low, breathe and blow,
Wind of the Western sea."

Woe, woe is me!

wh

What is a *watt?*

When he *went.*

Where will you *wear* it?

Which is the *witch?*

The poor *wight* was *white* with fear.

"I came like water and like wind I go
Into the universe, why, not knowing,
Nor whence, like water willy-nilly flowing,
And out of it, as wind along the waste,
I know not whither, willy-nilly blowing."

"What, without asking, hither hurried, whence?
And without asking, whither hurried hence?"

b AND *p*

"Be bold, be bold, and everywhere be bold."

"The barbarous Hubert took a bribe
To kill the royal babe."

"Blythe bell that calls to bridal halls
A bridal bed and a bier."

"Earth smiles around with boundless beauty blest."

"The bursting of the South Sea Bubble put the public in a hubbub."

"Do you think I am easier to be played upon than a pipe?"

"A pert, prim person of the Puritan party."

See the great ship plunge!

"Pleasures are like poppies spread."

"If thou be'st Prospero, give us particulars of thy preservation."

The pert pedlar prated proudly to the petty Prince about his pretty prints.

f AND *v*

"After life's fitful fever he sleeps well."

"But come, thou goddess fair and free, in Heaven yclept Euphrosyne."

"Fair is foul and foul is fair,
Hover through fog and filthy air."

"Full fathom five thy father lies."

His fancy flitted like a butterfly from flower to flower.

"Fair Virtue's form."

The vanquished Vikings, vowing vengeance, fell upon their fierce foes.

"Verily, verily, I say unto you. . . ."

"'Vanity of vanities,' saith the preacher, 'all is vanity.'"

"Lifting their voices to Heaven, in universal praise."

"And vainly venturous, soars on waxen wing."

m

"The murmuring pines and the hemlocks."

"A mild, mysterious, mournful sighing."

"A humming all over the tall, white branches, a humming of bees."

"Martha, Martha, thou art much troubled about many things."

His crime moved me mightily.

Give me some ice.

t AND *d*

Tut, tut! Hold thy tongue, its chatter would try the temper of a saint.

"A tell-tale, tattling termagant, that troubled all the town."

The wintry wind whipped his tattered garments about his trembling limbs, as, with chattering teeth, he tottered pitifully along, breasting the bitter blasts.

"They started at the tributary peal
Of instantaneous thunder."

"There blossomed suddenly a magic bed
Of sacred dittany and poppies red."

"The deluge deepens till the fields around
Lie sunk and flatted in the sordid wave."

"Meadows trim, with daisies pied,
Shallow brooks and rivers wide."

Down, down into Hades, where hideous dragons reared their horrid heads and doleful dirges droned through the deepening dusk.

"He licked the hand thus raised to shed his blood."

"Strikes through their wounded hearts a sudden dread."

STUDIES IN ENUNCIATION

l

"All's well that ends well."

Alas, he is ill and alone, all alone, in London.

"Lie lightly on her, earth,
Her step was light on thee."

"The linnets on the Linden-tree
Were making gentle melody."

"And drowsy tinklings lull the distant folds."

"Hear the sledges with the bells,
Silver bells!
What a world of merriment
Their melody foretells!"

"All the world loves a lover."

r

"Around the rough and rugged rock the ragged rascal ran."

"I prithee let me bring thee where crabs grow."

"Great rats, small rats, lean rats, brawny rats,
Black rats, brown rats, gray rats, tawny rats."

"Break, break, break,
On thy cold gray stones, O sea!"

Here rich and poor rest side by side, on Nature's breast reposing.

"Rend with tremendous sound your ears asunder,
With gun, drum, trumpet, blunderbuss, and thunder!"

"As from their own clear North, in radiant streams,
Bright over Europe bursts the boreal morn."

"The curfew tolls the knell of parting day;
The lowing herd winds slowly o'er the lea;
The ploughman homeward plods his weary way,
And leaves the world to darkness and to me.

"Now fades the glimmering landscape on the sight,
And all the air a solemn stillness holds,
Save where the beetle wheels his droning flight,
And drowsy tinklings lull the distant folds.

"Save that from yonder ivy-mantled tower
The moping owl does to the moon complain
Of such as wandering near her secret bower
Molest her ancient, solitary reign."

"On Linden when the sun was low
All bloodless lay the untrodden snow,
And dark as winter was the flow
Of Iser, rolling rapidly.

"But Linden saw another sight
When the drum beat at dead of night,
Commanding fires of death to light
The darkness of her scenery.

"By torch and trumpet fast arrayed,
Each horseman drew his battle blade;
And, furious, every charger neighed
To join the dreadful revelry."

g AND *k* (*q* AND HARD *c*)

"All that glitters is not gold."

"A giddy, giggling girl, her kinsfolk's plague.
Her manners vulgar and her converse vague."

He glowered gloomily at the garden wall over which had climbed the criminal, but the guard at the gate kept his counsel and gave no information of the guilty guest's comings and goings.

The Queen's quair went in quest of the quandom lover.

Be quick! Collect a quorum to settle the quarrel.

The choir quailed and quaked while he quietly questioned them.

"Clustering like constellated eyes in wings of cherubim."

"Armour rusting on his walls, to the blood of Clifford calls.
Quell the Scot, exclaims the lance, bear me to the heart of France."

"The clumsy kitchen clock clicked and clicked."

"The combat deepens. On, ye brave,
Who rush to glory or the grave!"

"Kings it makes gods, and meaner creatures, kings."

"He comes! He comes! In every breeze the power
Of philosophic melancholy comes!"

S AND *Z*

"Come thou, expressive Silence, muse His praise."

"When to the Sessions of sweet silent thought."

"Good Lord, how sweetly smells the honeysuckle
In the hushed night, as if the world were one
Of utter peace and love and gentleness."

"Charles Smith's Thucydides."

"A roseate blush, with soft suffusion,
Divulged her gentle mind's confusion."

Silly Susan sits on the sea-shore, stringing sea-shells and sea-weeds, and softly sings, or listens in silence for the syren's songs.

"A soft dazzle of azure."

"Zounds!" shouted Ezra, as he seized the amazed Zeno by the ears.

"Thus I thought
Until my mind was dizzy and distraught.
Moreover, through the dancing poppies stole
A breeze, most softly lulling to my soul.
And shaping visions all about my sight
Of colors, wings, and bursts of spangly light;
The which became more strange and strange and dim,
And then were gulfed in a tumultuous swim;
And then I fell asleep."

The guests drink toasts at the host's behest, till one insists that he fasts while he feasts and persists in his boasts; while another desists to fight with his fists, the ghosts which he wists not are mists from the coast.

sh

"The nations shall rush like the rushing of many waters, but He shall rebuke them and they shall flee."

"'Hush, ah, hush,' the scythes are saying.
'Hush and heed not, and fall asleep;
Hush,' they say, to the grasses swaying,
'Hush,' they sing to the clover deep.
'Hush, 'tis the lullaby Time is singing—
Hush, and heed not, for all things pass;
Hush, ah, hush,' and the scythes are swinging
Over the clover, over the grass."

Shunning the sunshine, he pushed him into the shadow of the shore and made a dash at the fish which, with a swish and a splash, vanished in the shallows.

th

The length and breadth and depth and height of being.

"I know that my Redeemer liveth, and that He shall stand at the latter day upon the earth; and though, after my skin, worms shall destroy this body, yet in my flesh shall I see God, whom mine eyes shall behold and not another."

"As the Thirty-third passed, enthusiastic thousands thronged their pathway through the thoroughfare, thrusting themselves into the thick of the fight and thus thwarting those who thought to throttle them."

Hang the table-cloths close to the clothes and close the clothes-basket.

j AND *ch*

The judge was gentle, just, and generous, but the jurors were cajoled by the lawyer's jests.

"Is jollity for apes and grief for boys?"

The Jewish title for God was Jehovah.

James was jesting when he adjured Jennie to jump over the juniper hedge.

"Judge not, that ye be not judged, for with what judgment ye judge ye shall be judged."

Charlie and Julia are such charming children.

My child, choose Chastity and Charity as thy handmaids.

John chose a chisel from a junk-chest in the janitor's lodge.

The jolly Chinaman chuckled and chortled over his chores.

The chimes are rung from a chamber between the chapel and the church.

n, nd, nt, ng, nk

No, no, not now!

"These are not natural events—they strengthen from strange to stranger."

"None knew thee but to love thee,
None named thee but to praise."

He is a nonentity and can pain nobody by such nonsense.

"Will all great Neptune's ocean wash this blood
Clean from my hand? No; this my hand will
rather
The multitudinous seas incarnadine,
Making the green—one red."

"Like leaves on trees the race of man is found,
Now green in youth, now withering on the
ground."

The painter complained that the red paint pained his eyes.

"She walks the waters and the land,
She and Quiet, hand in hand;
The low winds say,
'Sweet sounds obey,'
Soft colours fade away.
The winds say on—
Do they say on?
No whisper. Day is gone."

At the command of an angry hand, they sank upon a sandy bank, rank by rank, and sang and sang until the welkin rang.

V

ILLUSTRATIVE EXCEPTIONS TO ENGLISH VOWEL RESONANCES

"Order confounded lies, all beauty void;
Distinction lost; and gay variety
One universal blot."

SUCH, no doubt, must be the first impression of the vagaries of English pronunciation received by the foreigner who attempts to acquire our language *as it is written*, and it cannot be denied that the exceptions to the English rules of resonance are more numerous and, by reason of our defective spelling, apparently more erratic than those peculiar to the other modern languages. But the student who has mastered the variations of the English vowel resonances according to the English modes of syllabication, as indicated in the preceding

chapters, will be able to recognize the real vagaries of the language as such when he hears them. These exceptions can be learned only by rote and practise, as the exceptions in every language must be acquired.

The present chapter, as the title indicates, is designed merely to illustrate the general character of these vagaries, and to give a sufficient number of examples of such words most used by the average English speaker, to aid foreigners in acquiring, and careless or illiterate English-speaking students in correcting, an ordinary vocabulary. These examples are limited to variations of the English vowel resonances, without any attempt to classify variations of stress, emphasis, etc., which will be treated fully later in the study of the Music of Speech. A single list of words spelled alike and accented differently has been added to those *spelled* differently and pronounced alike, and *vice versa*, which are given at the request of the foreign students of English among the writer's pupils, for whose benefit this chapter was especially prepared. These aids in conquering the

vagaries of our language are not, of course, intended to replace a dictionary, which both native and foreign students should keep ever at hand for reference.

EXCEPTIONS TO THE RESONANCES OF *a*

The *Low Front Wide Vowel*, 14 (normal sound, *a* in *at*), when preceded by *qu*, *squ*, *w*, or *sw*, takes the resonance of the Low *Back* vowel, 37 (*o* in *odd*):

quadrant	squab	wad	swab
quality	squad	wan	swaddling
quandary	squadron	wander	swallow
quantity	squander	was	swan
quarrel	squash	wash	swamp
quarry	squat	watch	swap

In the words *waltz*, *want*, *water*, and *squaw* the sound is that of the Low Back Wide vowel, 38 (*a* in *awe*); authorities differ in regard to the *a* in *squalor*, the majority giving to it the sound of the Mixed *a* (20); while in *quack*, *quagmire*, *thwack*, *wag*, *swagger*, *swam*, and *wax* it reverts to its normal resonance. In a few instances, such as *chamber*, *angel*, *danger*, *manger*, it takes the sound of the

Mixed *a* (20); in the second *a* in *alas*, and when followed by *ss* (final), it takes that of the Low Middle vowel (25), as in the word *ass*, *class*, *grass*, *pass*, *lass*, *mass*, etc. But if the *ss* is not final, the preceding *a* reverts to the normal sound, as in *assume*, *classify*, *passage*, *lassi-tude*, *massacre*.

The *Low Middle Vowel*, 25 (normal sound, *a* in *ask*), when followed by *sh*, and (in monosyllabic words) by *nd*, and *nt*, takes the resonance of the Low Front Wide vowel, 14 (*a* in *at*):

ash	bashful	and	bland
cash	fashion	hand	grand
dash	clashing	land	stand

The *Low Middle Wide Vowel*, 26 (normal sound, *a* in *art*), when preceded by *qu*, *w*, or *sw*, takes the resonance of the Low Back Wide vowel, 38 (*a* in *awe*):

quart	war	sward
quarter	warn	swarm
quarto	warm	swart
quartz	warp	swarthy

but in *square* the *a* is the shade vowel of the Mixed *a*, as in fair.

EXCEPTIONS

The *Mixed a*, 20 (normal sound, *a* in *ale*), shows occasional vagaries in a few exceptional words, such as *orange*, in which it takes the resonance of the High Middle vowel, 15; in *are*, the Low Middle, 25; in *vase*, according to best English usage, Low Middle, though according to certain authorities it retains its normal sound in this word.

EXCEPTIONS TO THE RESONANCES OF *e*

The only notable exceptions to the normal sounds of *e* as classified in this work according to the open and closed syllables, page 191, are found in the word *pretty*, and in unaccented prefixes, such as *event*, *believe*, etc. (see page 205), in which the vowel takes the High Front resonance, 4 (*i* in *it*), and certain vagaries already noted under the Natural vowel.

This vowel is often *muted* in unaccented syllables closing with a resonant consonant, such as *heav'n* for *heaven*, *giv'n* for *given*, etc. In the case of *ed*, the *d* sometimes takes the sound of the corresponding non-resonant *t*, as in *talk't* for *talked*, *reap't* for *reaped*,

etc. In such words as *often*, *listen*, etc., the *t* is also silent—"of'n," "lis'en," etc., being the pronunciation made correct by best usage in speech; but in singing, the full sound of both vowel and consonant must be given. In case of the endings *es*, *eth*, *end*, *ent*, etc., however, great care must be taken both in speaking and in singing to preserve the normal resonance of the *e*, High Middle (15), and not permit the same to degenerate into the sound of the Natural vowel, so often heard in such words as *silent*, *solemn*, *treatment*, etc.

EXCEPTIONS TO THE RESONANCES OF *i*

The *High Front Wide Vowel*, 4 (normal sound, as in *it*), takes the two resonances of the *Mixed i* in tonic syllables ending in *ld*, *nd*, *gh*, *ght*, and *gn*—except when preceded by *u* (see page 210):

child	blind	light	sign	high
mild	find	might	malign	nigh
wild	mind	sight	condign	sigh

also in the words *Christ* and *pint*.

EXCEPTIONS

The *Mixed i*, 29 (normal sound, *i* in *time*), in unaccented syllables ending in silent *e*, such as *active*, *relative*, *infinite*, *facile*, *agile*, *mobile*, usually takes the resonance of the High Front vowel, 4 (*i* in *it*); but in a few words of this class, such as *hostile*, *reptile*, etc., some authorities retain the normal sound of the Mixed *i* (29).

In many words borrowed from the French, the resonance changes to that of the *French i* (1):

profile	clique	fatigue	machine
pastille	oblique	intrigue	ravine
castille	unique	regime	routine

also in *tricot* and *trio*.

EXCEPTION TO THE RESONANCES OF *o*

The *Mid Back Vowel*, 33 (normal sound, *o* as in *so*), in the verb to *do*, and its forms *doer*, *doing*, and compounds such as *undo*, *overdo*, etc., and in the words *two* and *who*, takes the resonance of the High Back vowel (30) *oo*, as in *too;* but in *to*, *to-day*, *to-night*, *to-morrow*,

etc., and in *bosom*, that of the High Back Wide vowel (31) *oo*, as in *took*.

The *Mixed o*, 36 (normal sound, as in *rose*, shows a peculiar variation of its two resonances in the words *one* and *once*, in which the primary resonance changes to that of the High Back Wide vowel, 31 (*oo* in *good*), the stress being shifted to the secondary resonance which also changes, taking the sound of the Natural vowel (21); but in *none*, *done*, *come*, *some*, *above*, *dove*, *glove*, *love*, it takes the resonance of the Natural vowel (21) alone; while in *gone* the sound becomes that of the Low Back vowel, 37 (*o* in *odd*); and in *move* and *prove* that of the High Back vowel, 30 (*oo* in *coo*).

When followed by the consonant combination *mb*, this vowel shows extraordinary vagaries, having its normal sound only in the word *comb;* in *bomb*, *combat*, *comrade*, and their compounds the resonance of the Low Back vowel (37) is the best usage, while in *tomb* and *womb* it takes that of the High Back vowel (30).

EXCEPTIONS

The *Low Back Vowel*, 37 (normal sound, *o* in *odd*), changes its resonance to that of the Natural vowel (21) in the following words:

other	oven	cover	does	worry
brother	govern	hover	doth	
mother	sloven	plover		

In many closed syllables, ending in *ld*, *lt*, *st*, this vowel takes the two resonances of the Mixed *o* (36):

old	hold	bolt	ghost
cold	sold	colt	host
fold	told	dolt	most
gold	wold	jolt	post

In *among* and *amongst* the resonance is that of the Natural vowel (21).

(For the resonance of *o* in *wholly*, see page 106.)

EXCEPTIONS TO THE RESONANCES OF *oo*

Since there is no regularity in the application of the two sounds of *oo* (see the High Back and High Back Wide vowels, pages 180–182), none can be listed as "exceptions" in the usual sense of that word; but the foreign

student must note that in the words *blood* and *flood*, the resonance changes to that of the Natural vowel (21), while in *brooch* it has the sound of the Mid Back vowel (33).

EXCEPTIONS TO THE RESONANCES OF *u*

The *Mid Middle Wide Vowel*, 22 (normal sound, as in *us*), changes its resonance to that of the High Back Wide vowel, 31 (*oo* as in *good*), in the following words:

bull	bulrush	cuckoo	pull
bullet	bulwark	cushion	pulpit
bulletin	bush	full	pulley
bullion	bushel	fulfil	put
bully	butcher	awful	push

The *Mixed u*, 32 (normal sound, as in *mute*), changes its resonances to those of the Mixed *i* (29), in the words *guide*, *guile*, *guise*, *quiet*, *quite;* in *suite*, and certain words in which *u* is preceded by *g* or *q*, such as *anguish*, *languid*, *quick*, *quest*, the primary resonance of the diphthong is changed to that of the High Back Wide vowel (30), the stress fall-

ing on the secondary resonance, while in the following words the *u* is silent, and only the resonance of the High Front Wide vowel (4) is heard:

build	biscuit	guillotine
guild	circuit	guinea
guilt	conduit	guitar

In the words *busy*, *business* and *minute* (period of time), *u* takes the sound of the High Front Wide vowel (4), while in *bury* and its compounds it has the resonance of the High Middle vowel (15). In the endings *gue* and *que*, both vowels are silent, as in *tongue*, *prologue*, *pique*, *technique*, etc.

EXCEPTIONS TO THE RESONANCES OF *ou*

The *Mixed Vowel ou*, 39 (normal sound in *out*), varies its sound without rhyme or reason in a manner most confusing to foreigners, who should commit to memory the lists given below, first noting the following class of words in which the *u* is silent, the *o* being

given the resonance of the Low Back vowel, 37 (*o* in *odd*)[1]:

arbour	colour	flavour	neighbour	saviour
ardour	demeanour	glamour	odour	savour
armour	enamour	harbour	parlour	splendour
behaviour	endeavour	honour	rancour	succour
candour	favour	humour	rigour	vapour
clamour	fervour	labour	rumour	vigour

The resonance of the Low Back vowel is also given to the *ou* in *cough*, *hough*, *lough*, *trough*, and, according to some authorities, to *sough*.

In the auxiliaries *could*, *would*, and *should* the resonance is that of the High Back Wide vowel, 30 (*oo* in *good*), but changes again to that of the Low Back Wide vowel, 38 (*a* in *awe*), in

ought	nought
bought	thought
brought	sought
fought	wrought

of the Mid Back vowel, 33 (*o* as in *so*), in *borough*, *dough*, *thorough*, *though*, and *al-*

[1] Although it is the general custom in America to omit the *u* in *writing* these words, it is still retained by English orthoepists, and by many American writers whose aim is to maintain the purity of the language according to its derivations.

though; but takes the two resonances of the Mixed *o* (36) in

soul	boulder	poultice
mould	shoulder	poultry
moult	smoulder	

The *Mid Middle Wide*, 22 (*u* in *us*), is used in

couple	cousin	flourish	young
couplet	double	nourish	enough
country	doublet	touch	rough
courage	doubloon	trouble	tough

and, according to some authorities, in *sough.*

The *High Back Vowel*, 30 (*oo* in *coo*), in

croup	coup	you	wound (to hurt)
ghoul	stoup	youth	
group	through	uncouth	

and in words borrowed from the French:

boudoir	coupé	douche	routine
boulevard	coupon	houri	soubrette
bivouac	recoup	route	souvenir

In *bourn, four, mourn, ou* is the "shade" vowel produced by conjunction of the Mid Back vowel (33) with the consonant *r;* while

in *our*, *hour*, *flour*, *sour*, that produced by *r* with the normal resonance of *ou* (39). See page 211.

EXCEPTIONS TO RESONANCES OF *ai* AND *ay*

The resonances of the Mixed *a* (20), usually given to this diphthong, are changed to those of the Mixed *i* (29) in the words *aisle* and *aye* (yes); in *quay*, however, the resonance is that of the High Front vowel (1); in *said*, *saith*, and *afraid*, that of the High Middle vowel (15); but concerning *again* and *against* authorities disagree, some giving preference to the High Middle vowel (15), others to the normal sound (Mixed *a*, 20).

In unaccented syllables *ai* takes the resonance of the High Front Wide vowel (4):

certain	fountain	wassail
curtain	mountain	
murrain	plantain	

EXCEPTIONS TO THE RESONANCES OF *oi* AND *oy*

The normal resonances of *oi*, 40 (as in *voice*), are varied in such words as *abattoir*,

memoir, *reservoir*, etc.—the primary resonance being that of the High Back vowel (30), the secondary that of the Low Middle vowel (25) —the stress of the voice falling upon the latter according to the rule for the pronunciation of the diphthong in the French language, from which these words are borrowed.

WORDS SPELLED ALIKE, BUT PRONOUNCED DIFFERENTLY

Bass (voice), Mixed *a* (29).
Bass (fish), Low Middle (25).
Bass (tree), Low Middle (25).

Bow (to incline), Mixed resonance (39).
Bow (in archery), Mid Back (33).

Lead (verb), Mixed *e* (6).
Lead (metal), High Middle (15).

Raven (bird), Mixed *a* (20).
Raven (to tear), Low Front Wide (14).

Read (verb, present tense), Mixed *e* (6).
Read (verb, past tense), High Middle (15).

Row (a fight), Mixed resonance (39).
Row (to propel a boat), Mid Back (33).

Sow (verb), Mid Back (33).
Sow (pig), Mixed resonance (39).

Tear (to rend), Shade vowel of *r* (15–26).
Tear (in weeping), Shade vowel of *r* (4–26).

WORDS SPELLED ALIKE

Use (noun, and its compounds), *s* non-resonant.
Use, (verb, and its compounds), *s* resonant.

Wound (past part. of *wind*), Mixed resonance (39).
Wound (a hurt), High Back Rounded (30).

WORDS PRONOUNCED ALIKE, BUT SPELLED DIFFERENTLY

Blew Blue	Mixed *u* (32).	Feet Feat	Mixed *e* (6).
Bough Bow	Mixed vowel (39).	Flee Flea	High Front (1)
Coarse Course	Shade vowel of *r* (pure).	Floe Flow	Mid Back (33).
Choir Quire	Shade vowel of *r* (mixed).	Foul Fowl	Mixed vowel (39).
Creak Creek	Mixed *e* (6).	Gild Guild	High Front Wide (4).
Dam Damn	Low Front Wide (14).	Groan Grown	Mixed *o* (36).
Die Dye	Mixed *i* (29).	Hail Hale	Mixed *a* (20).
Due Dew	Mixed *u* (32).	Hall Haul	Low Back Wide (38).
Draft Draught	Low Middle (25).	Heal Heel	Mixed *e* (6).
Fain Feign	Mixed *a* (20).	Heard Herd	Shade vowel of *r* (pure).
Faint Feint	Mixed *a* (20).	Hair Hare	Shade vowel of *r* (mixed).
Fair Fare	Shade vowel of *r* (mixed).	Hart Heart	Low Middle Wide (26).

WORDS PRONOUNCED ALIKE

Hie High	Mixed *i* (29).
Hoes Hose	Mixed *o* (36).
Hole Whole	Mixed *o* (36).
Him Hymn	High Front Wide (4).
Knead Need	Mixed *e* (6).
Know No	Mid Back (33).
Knot Not	Low Back (37).
Limb Limn	High Front Wide (4).
Loan Lone	Mixed *o* (36).
Load Lode	Mixed *o* (36).
Lain Lane	Mixed *a* (20).
Moat Mote	Mixed *o* (36).
Made Maid	Mixed *a* (20).
Maize Maze	Mixed *a* (20).
Meat Meet Mete	Mixed *e* (6).
Mean Mien	Mixed *e* (6).
Might Mite	Mixed *i* (29).
Mode Mowed	Mixed *o* (36).
Nay Neigh	Mixed *a* (20).
Oh! Owe	Mid Back (33).
O'er Ore	Shade vowel of *r* (pure).
Our Hour	Shade vowel of *r* (mixed).
Pain Pane	Mixed *a* (20).
Pear Pair	Shade vowel of *r* (mixed).
Plow Plough	Mixed vowel (39).
Paws Pause	Low Back Wide (38).
Peace Piece	Mixed *e* (6).
Peer Pier	Shade vowel of *r* (mixed).
Peak Pique	Mixed *e* (6).
Pole Poll	Mixed *o* (36).
Pray Prey	Mixed *a* (20).
Rain Rein Reign	Mixed *a* (20).

Rode Road Rowed	Mixed *o* (36).	Sole Soul	Mixed *o* (36).
Rap Wrap	Low Front Wide (14).	Team Teem	Mixed *e* (6).
Red Read	High Middle (15).	Taught Taut	Low Back Wide (38).
Reed Read	Mixed *e* (6).	Thyme Time	Mixed *i* (29).
Right Rite Wright Write	Mixed *i* (29).	Vail Vale Veil	Mixed *a* (20).
Rhyme Rime	Mixed *i* (29).	Vain Vane Vein	Mixed *a* (20).
Roe Row	Mixed *o* (36).	Way Weigh	Mixed *a* (20).
So Sew	Mid Back (33).	Waist Waste	Mixed *a* (20).
Seal Ceil	Mixed *e* (6).	Waive Wave	Mixed *a* (20).
Seen Scene	Mixed *e* (6).	Weak Week	Mixed *e* (6).

WORDS SPELLED ALIKE, BUT ACCENTED DIFFERENTLY

Noun or Adjective	*Verb*
Ac′-cent	Ac-cent′
Col′-lect	Col-lect′
Com′-press	Com-press′
Con′-cert	Con-cert′
Con′-duct	Con-duct′
Con′-fines	Con-fine′
Con′-flict	Con-flict′
Con′-jure (verb—to bewitch)	Con-jure′ (to swear by, or call on solemnly)
Con′-serve	Con-serve′
Con′-sort	Con-sort′
Con′-test	Con-test′
Con′-tract	Con-tract′
Con′-trast	Con-trast′
Con′-verse	Con-verse′
Con′-vict	Con-vict′
Con′-voy	Con-voy′
Des′-ert	De-sert′
Dis′-count	Dis-count′
En′-trance	En-trance′
Ex′-tract	Ex-tract′
In′-cense	In-cense′
In′-stinct (noun)	In-stinct′ (adjective)
Per′-fume	Per-fume′
Pro′-gress	Pro-gress′

Pro′-ject.	Pro-ject′
Pro′-test	Pro-test′
Re′-fuse (non-resonant *s*)	Re-fuse′ (resonant *s*)
Re′-tail	Re-tail′
Sur′-vey	Sur-vey′
Trans′-fer	Trans-fer′

NOTES AND REFERENCES

I

According to the experiments made with the *flames of Koenig* in measuring the vibrations of the five Italian primary vowels, groups of three vibrations produce the vowel *a;* groups of two, *e* and *o;* while *i* and *u* each register single vibrations.

By referring to Diagrams I and III (pages 163 and 173) the reader will see that the number of vibrations is decided by the ***height*** of the tongue, which, being at its lowest depression for *a*, the Low Middle position, permits the greatest number of vibrations to pass at one time; but when lifted for *e* to the Mid Front, or for *o* to the Mid Back position, allows only two vibrations to pass; while for *i* the High Front, and *u* the High Back positions, being at its highest possible elevation, renders it impossible for more than one vibration to pass at a time.

The fact that the same number of vibrations produces two different vowel sounds, as in the case of *e* and *o* and *i* and *u*, is no proof, as Docteur Marage claims, that the ***character*** of the vowel is decided by the adjustment of the vocal cords; or,

as others maintain, by the muscular action of the glottis. On the contrary, it merely proves that the character of the vowel is due to the *shape* of the *vowel-chamber*, which in the case of *o* and *u* is *lengthened* by a backward movement of the tongue and a forward movement of the lips in rounding those vowels.

II

"*We may assume*," says Doctor Scripture, in stating his "puff theory" of the production of the vowels by the "lips" of the glottis (*Researches in Phonetics*, page 116), "*that these muscles contract differently for the different vowels; the vowel being formed in the glottis as well as in the mouth.*"

In his further assertion that "*when the slant fibres which insert along the medial edge of the glottal lips are contracted, there will be nodal points similar to those of stretched strings*," we have an exact diagnosis of one of the causes of the voice malady known as "nodes" on the vocal cords, from which throat specialists reap such a rich harvest of patients among singers and public speakers, through this unnatural and pernicious effort to produce the vowels in the larynx; the office of that organ being to produce the fundamental *tone* alone.

That Doctor Scripture has mistaken for a vowel "puff" the *voice impulse* made by the glottal lips in the process of syllabication (see Chapter VII, page 111) is evident from his perplexity concerning the "physiology of the aspirate (*h*)"—the only

letter of our alphabet that *does* originate in the glottis. "*We might suppose that the h was omitted,*" he says, in referring to the words "*saw him die,*" from the Cock Robin record . . . "*the vibrations are continued without interruption between the two vowels, and yet the gramophone disc speaks a distinct h. How this breathy h is produced while the glottis is vibrating is a question to which a decisive answer cannot be given now.*"—Researches in Phonetics, p. 46.

III

Efforts have been made to arrange the resonances of the vowels in a regular musical scale, and thus establish a fixed standard for the same, but the startling discrepancies in the results attained by the different writers on this subject in their experiments with the five primary Italian vowels seem sufficient evidence of the impossibility of establishing any such universal standard. For example, Helmholtz gives *b''* flat as the resonance of *a*, while Flörcke gives c', Trautmann *f'''*, Hellwag *f sharp*, and Merkel *a* for the same vowel! (See table given by Helmholtz.)

IV

Although Doctor Scripture repudiates "the notion that any knowledge of the action of the tongue can be gained by attending to its sensations," he also testifies to the equal unreliability

of the *ear*, even in distinguishing qualities of *tone* in accent (see foot-note, page 15). Indeed, had not the writer's experiments already demonstrated, to her own satisfaction and that of her pupils, the importance of cultivating the tactile sensibility of the tongue, the following statements quoted from Doctor Scripture's own writings would be sufficient to convince her of the benefit to be gained from "attending to the sensations" of that organ, until properly trained to its legitimate work in the processes of speech:

(a). "*In first attempting to make a new sound, or to notice the details of a speech movement, we are especially conscious of the movement or group of movements.*"—Elements of Experimental Phonetics, p. 381.

(b). "*A careful education of the sense of touch in the mouth renders it possible to feel the movements with greatly increased accuracy.*"—Ibid., p. 327.

(c). "*In song, the tongue assumes fairly constant positions for considerable lengths of time, and these positions are approximately the same on different occasions. It is thus possible to map out the positions with considerable accuracy although the work requires a long time.*"—Ibid., p. 327.

(d). "*The position of the tongue is indicated at each moment by irritations from its surface and its muscles. When a movement is repeated so often that definite associations are established between the motor irritations of the various muscles at each moment and the sensory irritations present at that moment, the sensory irritations serve to regulate the*

motor ones and govern the movement. These sensory impulses are of different degrees of fineness. Upon them depends, to a large degree, the accuracy of intended movements, and their fineness can be increased by the proper practice."—Ibid., p. 191.

(e). "*Special teaching of the muscle sensations directly has been shown to be of use.*"—Ibid., p. 388.

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